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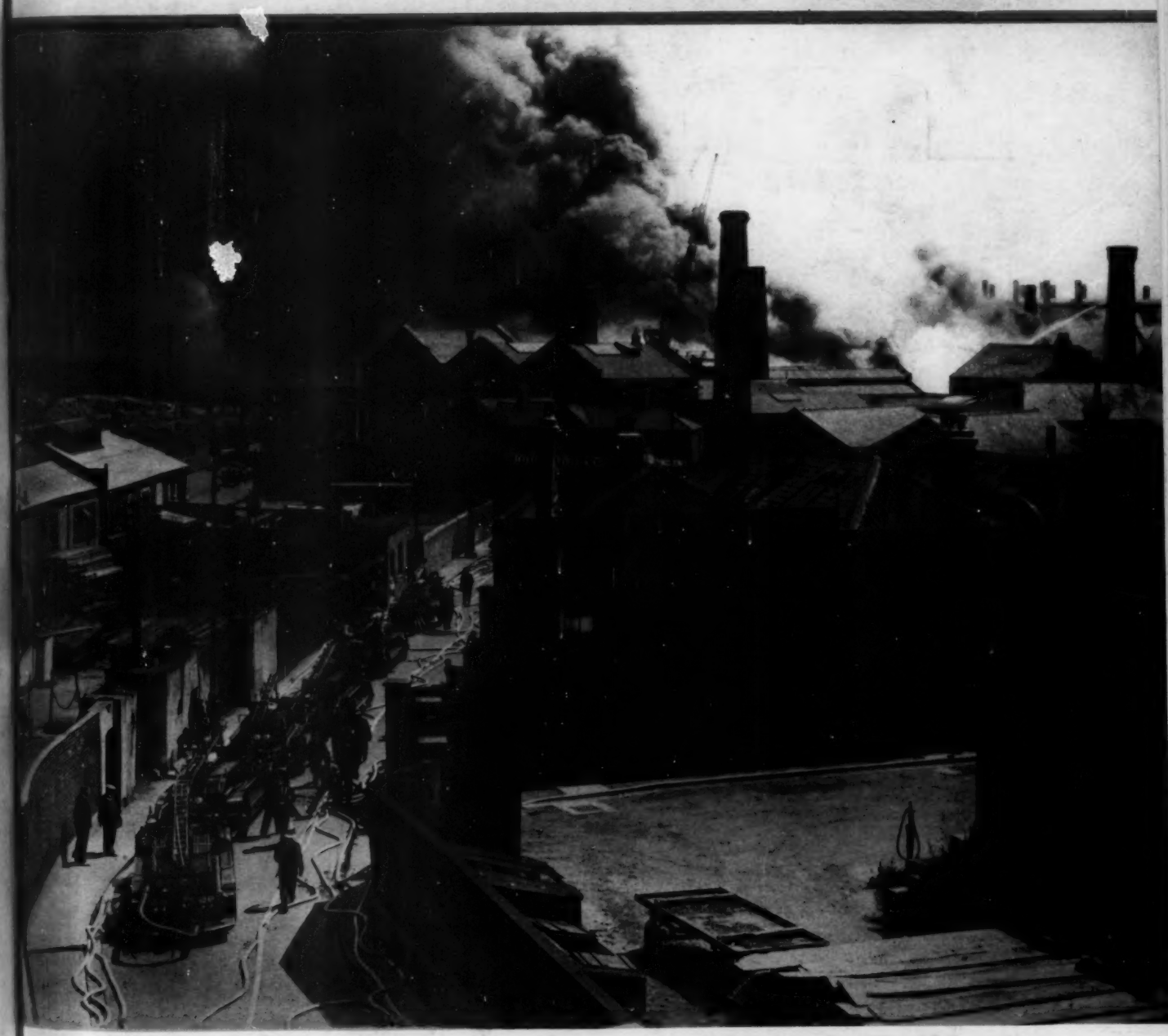
FIRE ENGINEERING

The Journal of the Fire Protection Profession Since 1877

Vol. 86, No. 8 AUGUST, 1933 Member A.B.C.-A.B.P.



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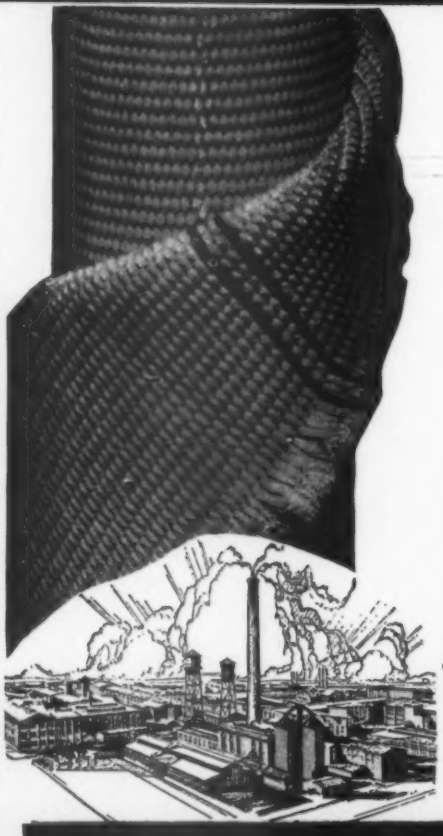

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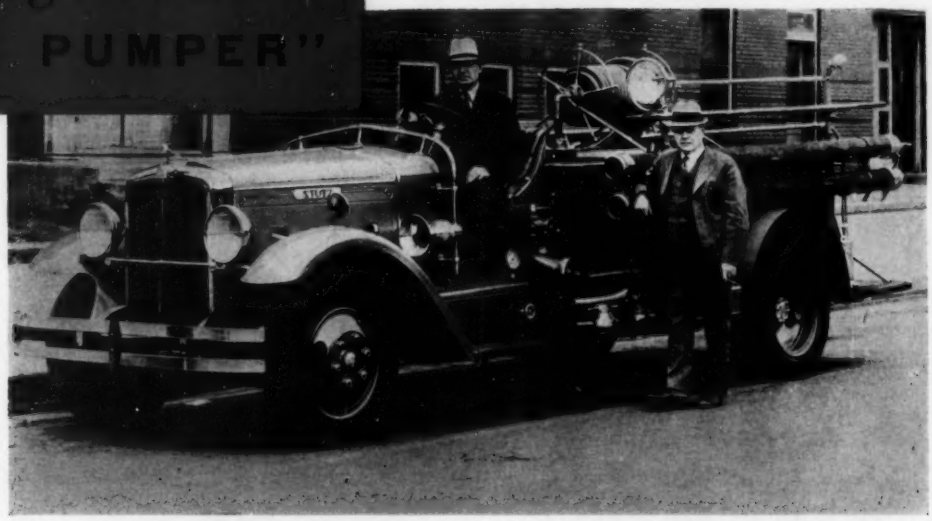

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THERE'S at least some consolation for those who are not fortunate enough to be able to take in the I. A. F. C. Convention on the good old S.S. Seeandbee.

● The next issue of FIRE ENGINEERING will bring the convention home to you, with a complete story of the proceedings, including numerous snapshots taken at the scene. Two of our staff representatives will be in attendance to make sure we do not miss anything that might be of interest to our readers. In other words, you'll have everything but the trip and the pleasure of rubbing elbows with your fellow fire chiefs.

● The fire service today is confronted with many difficult problems crying for solution. It has never been more necessary for fire chiefs to keep closely in touch with all developments—and that, of course, is where you can always count on your good old friend, FIRE ENGINEERING.

The Publishers

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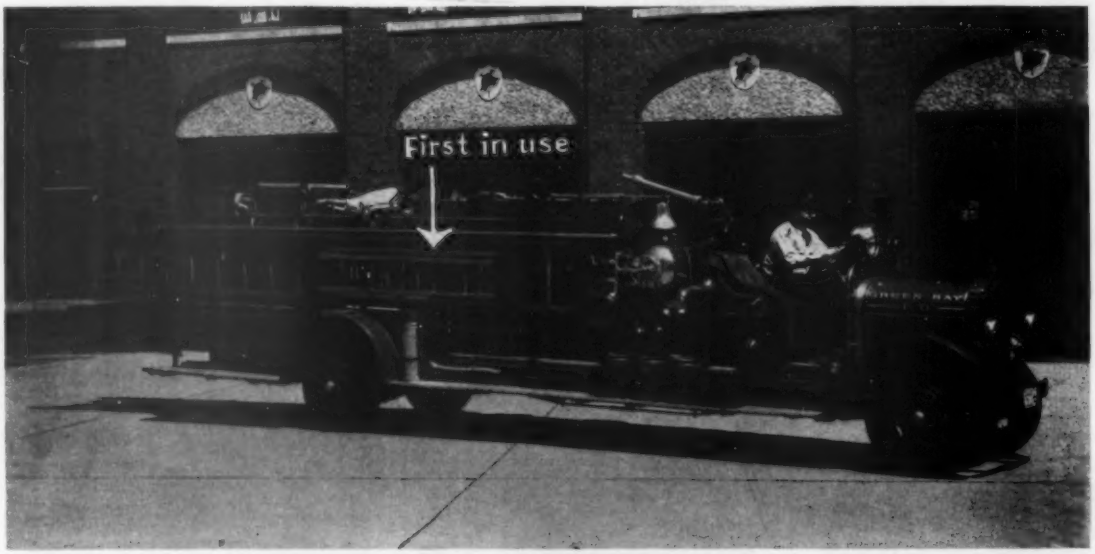

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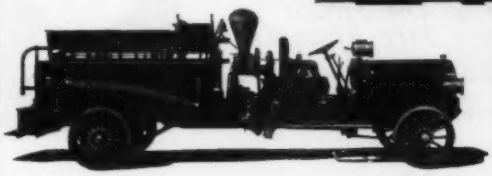

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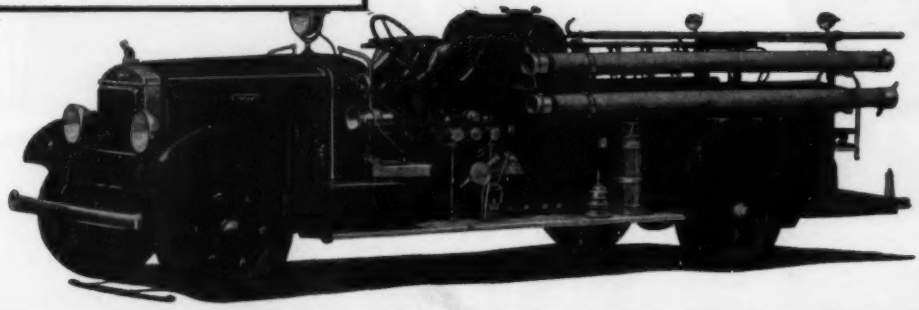

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Standard discharge ⅜", but we can furnish with ¼", ⅝" or ½" tip at no extra charge. Or, extra assorted tips can be ordered.

No. C668. Colt Leader Line Nozzles, for direct connection to 1½-inch hose. Any thread. Each, only..... **$10.25**

No. C669. Extra Tips, sizes ¼", ⅝" ½", ⅝" each. **$1.95**

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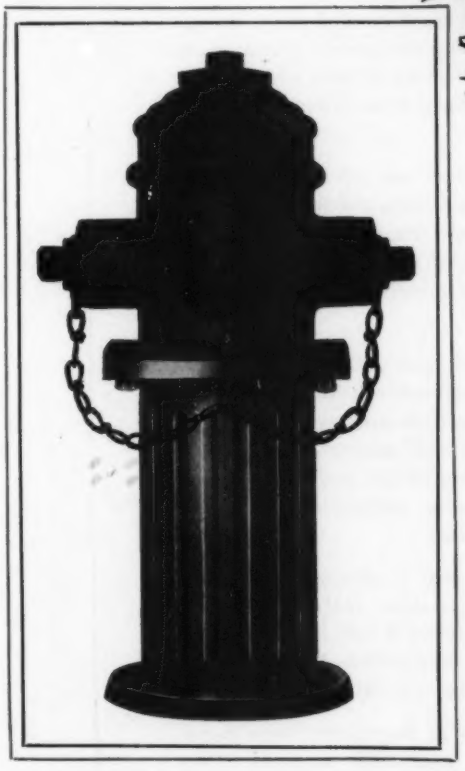

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THIRD: Crispin Hydrants have brass nozzles, which means that couplings and reducers always fit perfectly and are interchanged without a second lost.

FOURTH: Nozzle openings on a Crispin Hydrant are cast in head, which permits change of arrangement and size of nozzles at small cost. The Crispin is really designed and made to fire chiefs' specifications. Every chief should select and recommend the Crispin Hydrant.

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you and your men are the actual users of fire hydrants. When hydrants are being considered we suggest you investigate the Crispin — it's made especially for your work.

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WHAT THE NATIONAL INDUSTRIAL RECOVERY ACT MEANS TO YOUR FIRE ALARM SYSTEM

THE National Industrial Recovery Act is a boon to every municipal fire department in the United States. It offers an opportunity that will not occur again in a lifetime, to install much needed complete new fire alarm systems or extend existing systems. The Federal government stands ready to make an outright grant to municipalities of 30% of the cost of labor and materials employed on fire alarm projects and loan the remainder over a period of years at a low interest rate.

The government recognizes fire alarm as important as any other improvement. A ruling has been made by Colonel Henry M. Waite, Deputy Administrator under Secretary of the Interior Ickes, to the effect that new fire alarm systems (which include central office apparatus, boxes and outside construction), fire headquarters and other buildings necessary would be provided for under Section 202 (A) of the Act which reads as follows:

> ***"The Administrator, under the direction of the President, shall prepare a comprehensive program of public works, which shall include among other things the following: (A) Construction, repair, and improvement of public highways and parkways, public buildings, and any publicly owned instrumentalities and facilities."***

There is hardly a city or town in the United States that is adequately equipped in a fire alarm way. Many cities need entirely new fire alarm central offices and engine house recording equipment. Nowhere can be found a sufficient number of fire alarm boxes. Consequently, every fire chief and superintendent of fire alarm should take advantage of this opportunity to build up his fire alarm system.

More than 95% of the municipal fire alarm systems of the country were manufactured by The Gamewell Company which has been successfully engaged in the fire alarm business for more than seventy years and is in an excellent position to serve your fire alarm requirements. Our sales engineers are located at convenient points about the country. We should be glad to have one of them call upon you to assist in laying out fire alarm plans and provide estimates of the costs that are required in making application for the Federal loans. This service will not obligate either you or your city in any respect.

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Volume 86 AUGUST, 1933 Number 8

With the Editor

Costly Hose Bursting hose seriously handicapped a large eastern Fire Department recently when fire destroyed a half-million dollar flour mill. In commenting on the blaze, the Chief said: "We were terribly handicapped. Hose burst right and left." The Chairman of the Board of Firemasters is reported as saying that the city had a serious shortage of hose, because it has been saving on hose purchases and "this demonstrates how utterly foolish a policy we have been following." He estimated that 50 per cent of the city's hose is rotten.

George W. Booth, Chief Engineer, of the National Board of Fire Underwriters, said recently that his organization is getting a number of reports from various points of the country where hose has burst at fires.

Apparently in their efforts to economize city authorities have put off replacing hose which has worn out or have purchased low grade hose because it was cheap.

The unfortunate angle to the hose situation is that the real condition of hose is not demonstrated until a large fire occurs, when heavy streams of good pressure are needed. And then is the time that dependable hose is vital to success.

Many city officials are not aware of the fact that hose, unlike other fire-fighting equipment, deteriorates with age, even though not in service. And if dependable performance is wanted, old hose must be replaced periodically by new. That is not all. Dependable hose must be purchased in the first place.

If the Fire Department budget is limited, it is better to buy half the quantity of good hose than twice as much of the cheap product. Cheap hose usually proves to be the most costly in the end, for the failure of one line at a fire may increase the fire loss tremendously.

Now as never before hose should be given its semi-annual or annual pressure test. If it can't stand the test, it should be thrown out. To forego the test in order that the maximum quantity of hose may remain in service is dangerous in the extreme.

In the final analysis, a fire fighting organization is only as good as its hose.

Fred Sheppard

Mobile Air Compressor as a Valuable Aid to

Forcible Entry

BY EDWARD LAMB,
Engineer, Air Compressor No. 1,
San Francisco, Cal., Fire Department

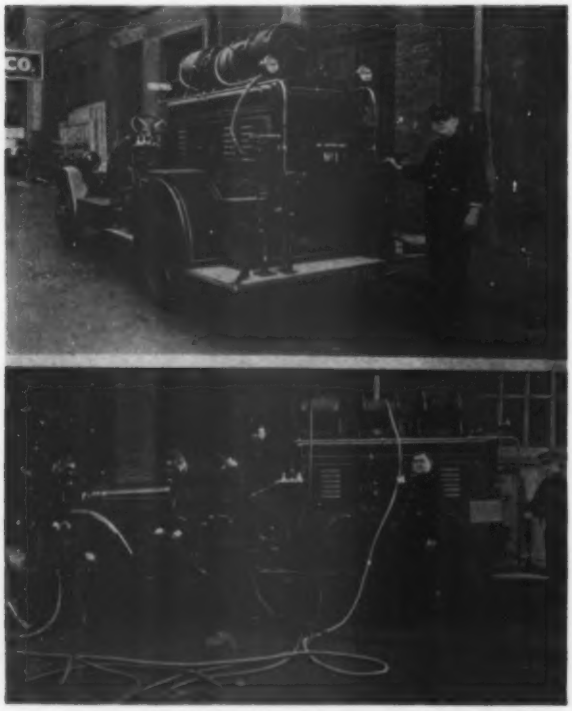
SINCE the days of 1853 when Latta developed the first steam fire engine, construction has gone along in pumping units until today we have the modern powerful gas pumping engine job, and during the past decade apparatus manufacturers have developed all kinds and types of powerful equipment. The latest things have been modern rescue Squad Wagons and powerful searchlight engines of many candle power.

Hook and ladder and truck companies are one of the most valuable assets to any Fire Department, and any Chief of department will agree with me that forcible entry is one of the most important factors in the operation of a fire inside of buildings or basements, or places inaccessible.

Taken on an average, there are three Engine Companies to one Truck Company and a truckman is a man of all work at a fire. It depends upon a first-class truck captain in the operations at a fire, to lead his men in laddering buildings and opening up, which we term forcible entry, so that it is possible for engine men, fire boats and those men who are handling streams of water, to reach the seat of a fire. So this is where the new Air Compressor has become one of the most valuable assets to any large Fire Department, or, for that matter, small department.

Air Compressor

The credit of introducing the Air Compressor in Fire Departments belongs to Charles J. Brennan, Chief of the San Francisco Fire Department, an able and progressive Chief, having received his start as a substitute fireman and who, through hard and diligent efforts and attention to duties, rose from the ranks, through civil service examinations, to that of Chief Engineer. Because of the many battles he has fought and his keen insight into fire matters and details, we are developing the first Air Compressor introduced in any Fire Department in the world.



Two Views of Air Compressor No. 1, San Francisco Fire Department

In January of 1931, Air Compressor No. 1 was put into service and has performed work that will be of interest to all Chiefs. This Air Compressor is located at the quarters of Engine No. 4, at 676 Howard Street, San Francisco, which is within a reasonable distance of the water front, on the edge of the retail mercantile business district and, also, on the edge of the wholesale district and on the other side, the manufacturing section.

In the many duties of this unit, are included the following:

1. Answering to all special calls for fire service.
2. Cooperation with the high pressure system in repairing leaks in the high pressure system and cutting out pavements or any other services that may be required of it.
3. Raising steam in fire boats. There are two fire boats in the S.F.F.D. When these are out of service for repair or inspection, the Air Compressor lays two three-quarter lines into a two-way, pumps 100 pounds of air pressure, starts the water pumps, the bilge pumps, starts the oil atomizer under the boilers and in 45 minutes from the beginning of operation, the fire boats have 50 pounds of steam and the Air Compressor returns to quarters. Heretofore, the old method of chopping logs and wood to build a fire under the boilers took at least 24 to 36 hours to put the fire boats into service. The Air Compressor does this in 45 minutes.
4. Cooperation between Police and Fire Department. Forcible entry of any building or of any service that may be required by the Chief of Police, such as night drills on Banks, Post Offices or any other financial or mercantile establishment where gases or tear gas come in, ventilating the buildings. These drills generally take place during the night.

Description of Air Compressor

Ingersoll-Rand, Type 20, Air Compressor, vertical two cylinders, single acting, bore 8 x 6 inches, piston displacement 220 cu. ft., free air per minute at 100 pounds pressure, directly connected to a Waukesha motor 4 cylinders 4 cycle, with a Ricardo head, Model HS, horsepower 36, engine is equipped with closed governor and an automatic air operated speed control governor. This combination slows down the engine when the compressor is unloaded, i.e., when air is not being used and speeds it up when the air is again in demand.

There is a storage tank of 32 x 68 inches, running cross-ways under the driver's seat. There are two sides, one the high pressure side, one the low pressure and operating side. On the high pressure side are 5 valves, two independent and 3 directly connected to three hose-

reels on top with 200 feet of hose on each. This is termed the high pressure side. The low pressure side has one reducing valve directly connected, one safety valve, so that if anything should happen to the reducing valve, the safety valve is positive in its action. The reducing valve is set at 8 pounds per square inch. The safety valve is set at 12 pounds per square inch. There are two outlets on the low pressure side, one for the Bullard sewer mask and the other, directly connected to a filter 6 x 16 inches. This filter has a canester 6 x 12 inches screened on both ends with wire mesh 1-32. This contains 5 pounds of activated charcoal which acts as a purifier for the residue. There is also a high pressure by-pass into this low pressure line leading to this filter in case of a great distance where increased pressure is required or a mishap to the low pressure side.

Tools and Equipment Carried for Fire Use

The following tools and equipment are carried on the apparatus:

Two 95 lbs. Pavement Breakers.
Two I. R. Pneumatic 18 lbs. Pavement Breakers.
One I. R. Trench Digger with Spade.
One I. R. Backfill Tamper.
One Ingersoll-Rand "Safety-First" Air Saw, with No. 3 extra circular saws, having three teeth to the inch and one-sixty-fourth pitch cutting a depth of 4 inches.
Nine lengths of Hose, 50 feet long and ¾-inch 6-ply air hose.
Two lengths of Hose, 25 feet long, with a "Y" fitting with female coupling on the main stem and two male couplings on the "Y" branches. This is for double use in the Air Helmets.
Eleven assorted Gads 12 inches to 18 inches in length for cutting concrete and breeching walls.
Four Asphalt chisels 16 inches long and 3 inches wide.
Six wood-cutting axes 16 inches long and 6 inches wide at the axe point. These axes are used for cutting of wharf planks and other heavy timbers, and are used with the 95 lbs. pavement breakers in forcible entry to heavy wooden construction.
Six small chisels for use in I. R. 18 lbs. paving breakers. Two are shaped as cold-chisels for cutting steel window sash, rivets, and any other steel objects. Two are shaped as concrete Gads. Two are shaped as wood-chisels with 3-inch points used for the purpose of gaining entry to small or narrow constructions, such as passageways in ships, ice boxes, etc., where it is most difficult to use an axe.

These two Air Helmets were designed by Edward Lamb, Engineer of Air Compressor No. 1, S. F. F. D. They were constructed in our shops and consist of: One Sam Brown belt, black heavy leather and of the Army type. Attached to the left side at hip is I. R. female coupling ¾-inch, to this is attached one ¾-inch I. R. air valve, and to this is attached a piece of metallic flexible tubing ¾-inch by 14 inches long, all sweated together. On the end of this flexible tubing is sweated a male connection of the Burrell type. To this is attached a Bullard Face Mask with a 10-inch flexible hose with a female connection. The peculiar construction of this Bullard mask is that the air enters and shoots upward to eye glasses and circulates over the face and goes out the exhalation valve at the chin of the mask. After leaving the exhalation valve the air continues in an upward movement over the outside of the mask, thus keeping the outside of the eye glasses also clear to some extent. The Bullard Face Mask is made of flexible rubber of the face piece type, having adjustable straps to fit around the neck and over the head to hold it secure.

Attached to the belt on the left side is a loop for a Mine Safety Lamp (five-cells). On the right side is an axe guard and shield. A special 2½-lb. fire axe, having a special 6-inch chisel-pointed pick and a 4 x 4 inch blade with an 18-inch handle and a hook on the end of the handle. This axe is used for opening pipe-casings, doors, windows, etc. There is also a "D" fastened in the center-rear of belt for fastening life lines.

The ¾-inch by 25-foot hose leading from the "Y" is fastened to the female connection of this belt, thus enabling two men to work simultaneously off one air-line, with two helmets. Air is supplied from the compressor through the charcoal filter at 6 lbs. per square inch. And in case of long leads the by-pass (high pressure) can be cracked, supplying increased air to overcome friction loss.

Air Supply

Amount of air necessary for men working, taken from Bureau of Mine Schedule No. 19, Procedure for Testing Hose Mask for Permissibility, states that a blower must deliver one hundred liters per minute, or two hundred and ten cubic feet per hour.

This amount is far in excess of the amount actually needed. Research shows that the following data from Physiology of Exercise by McCurdy and McKenzie:

Air breathed at sea level—
Men at rest..... 22.1 cubic feet per hour
Man walking at—
four miles per hour.... 79.5 cubic feet per hour
five miles per hour.... 130.1 cubic feet per hour

Working Rate ft. lbs per minute	Air breathed cu. ft. per hour	Remarks
4000	69	Athletic man in
6000	83	early 20's be-
8000	120	fore training.
4000	77	Athletic middle
6000	98	aged man be-
		fore training.

From our actual test plus reference, two of which are given above, it is our opinion and that of safety engineers that the air requirement of a man engaged in average manual labor should be very near that of a fireman wearing these air-breathing helmets. A man walking at a rate of four miles per hour requires approximately 80 cu. ft.

Air Masks with Hose, Used in Rescue and Other Operations

of air per hour. It is also obvious that this figure could vary widely with the size and age of the man or fireman and the type of work in which he is engaged.

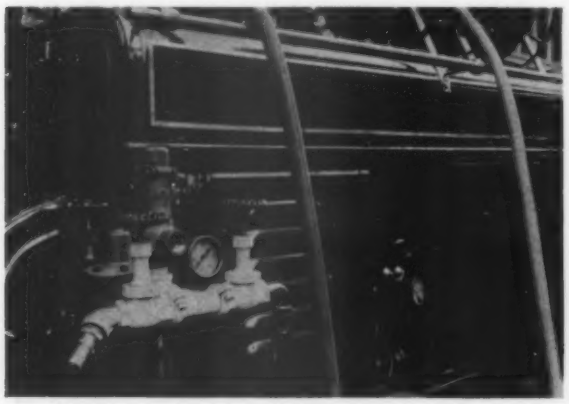
Let us assume 80 cu. ft. per hour as the actual maximum air requirements of a fireman engaged in fire work, and it is easily to be seen that the air unit of the San Francisco Fire Department supplying 220 cu. ft. of free air per minute is far more than the average requirement. In actual test in the smoke room of the drill tower of the San Francisco Fire Department two men equipped with the air helmet and carrying a 95 lb. paving breaker with them, had no difficulty in working and breathing freely under the most stringent conditions.

In several instances this Unit has performed work that has lightened the duties of Truck Companies considerably, and saved many hours of labor.

In Thompson's Restaurant at Kearney and Market Streets, responding to special call from Box 48, this unit was used in cutting away the concrete floor from underneath. In fact, the main floor was a concrete slab and a wooden floor over the top of it. The kitchen range was built on top of this floor, which was in violation of all fire laws, but nevertheless there was a wooden floor between the range proper and the concrete floor which took fire from an overheated range and smoldered for some time. This would have been at least three or four hours' work for two Truck Companies. The air guns did this work in thirty minutes.

At Hawley's Rag Warehouse fire, special call from Box 699 was answered, and the Chief Engineer in charge of operations at this fire realizing the danger from enormous amount of water being absorbed by bales of rags, paper and other vegetable matter, ordered the brick walls breached below a double window sill. Two 95 lb. guns with gads knocked out the wall a space of about three feet from the window sills to the level of the floor and about eight feet long. This released a great quantity of water and facilitated the duties of overhauling at this fire. Being on the second-floor level the truckman simply took the bales of rags and waste paper and dumped them into the street.

In a basement fire in a Public Market special call from Box 2314, the basement was occupied by the tenants of this market, ice boxes for refrigerating meat, a bake shop and various other uses as storage. The fire started in a bunch of egg crates that were being salvaged for resale in the middle of the building, driving the bakers at work out of the building. In the confusion one of the bakers, supposedly having gone back for his money, lost his way and apparently went for the front of the basement. The fire being in the middle of the basement had gained considerable headway when the second alarm was sent in. The fire was an ordinary fire but the officer in charge of this operation was informed some half hour later that a man was missing. The air compressor performed service breaking holes through concrete floor for cellar pipes and circulators, and tearing out front lights in sidewalk, where the man was found suffocated in the extreme front end in a small room but not burned.



Air Fittings on Compressor Unit

Air Compressor — 1932 Apparatus Report

	Special Calls	Still Alarms	High Pressure Calls	Total Calls	Fire Service	High Pressure Calls	Total Service Hrs.	Min.
January	1	0	3	4	0	0	11	5	11	5
February	1	0	8	9	0	30	15	30	16	
March	1	0	7	8	1	0	13	15	14	15
April	1	2	1	4	1	40	2	50	4	30
May	0	0	9	9	0	00	13	55	13	55
June	1	0	6	7	0	50	6	30	7	20
July	1	0	1	2	1	15	1	00	2	15
August	0	0	1	1	0	0	2	30	2	30
September	0	0	3	3	0	0	13	10	13	10
October	0	0	7	7	0	0	17	20	17	20
November	0	1	2	3	0	0	2	00	2	00
December	0	0	3	3	0	0	3	25	3	25
TOTAL	6	3	49	60	5	15	107	45	112	60

Special call from Box 915, Pier 15, Waterfront. This new pier was under construction, the workmen having an enormous tar kettle running all week on top of the new concrete floor. In spite of the 6 inches of sand on top of this new concrete, for the week that this tar kettle had been working, the heat penetrated through this 6 inches of sand, 8 inches of concrete and set fire to the 18 x 24 wooden stringers under the dock, and also the 4 x 12 double deck planks. Using two 95-lb. guns, a hole approximately 10 x 12 feet was cut through this reinforced concrete and using the axes belonging to the 95-lb. guns the two 4 x 12 plank floors running diagonally were opened up to this 18 x 24 stringer. This operation was performed in about 40".

Conclusions

The foregoing facts have been experienced by me and the work was accomplished by this unit. I am a member of the International Association of Fire Chiefs and have served in the World War as a First Lieutenant Fire Marshal. After attending numerous conventions and hearing discussions, and after thinking over and reading about the Chicago Tunnel Fire which Chief Corrigan had to contend with, and thinking back to the last pier fire Chief McElligott, of New York, had, and reading of the accounts that it started from beneath the boiler at the end of the pier, I cannot help but pass the good news along to other Chiefs. The latest report is that Chief Evans, of New Orleans, is building a Searchlight Engine and Air Compressor combined, and he is to be congratulated.

This information is being assembled and written under the full cooperation of Charles J. Brennan, Chief of the San Francisco Fire Department, and is food for thought for all Chiefs of Fire Departments of the International Association of Fire Chiefs. Credit must be given to Samuel Birmingham, the Superintendent of Equipment, Harold Jones, Foreman of the Shops, and Mr. Baker, the machinist who assembled this apparatus, for that is what it was, using a four-cylinder chassis of the truck type commercial. The Ingersoll-Rand Compressor described herein, was mounted on four wheels and dragged along as a trailer, purchased in 1909. The hose reels came off a discarded chemical engine. In fact, the hand rails and seats and all that could be salvaged from old equipment were used in this assembling, and today it has fully warranted and met all expectations of the Chief.

The International Settlement Has a Self-Contained Organization in the

Shanghai Fire Brigade

By WALTER BUCHLER

CAUSES of fire are very varied in Shanghai. Those due to electricity are few and as a rule result from unauthorized persons meddling with the installation. Cheap wire is used for added light fixtures as the average Chinese simply loves light. Lamps and kerosene cooking stoves are extensively used by the Chinese and through inattention and careless handling also cause fires. Chinese houses have no flues, for charcoal fires are used in the rooms. Often they place one under their brick bed to warm it, and let the fire burn all night. Smoking has increased tremendously among all classes of Chinese, men and women, and this has also caused more fires.

Factories in the Settlement are very well supervised, being inspected by the P. W. D. of the Municipality in the course of building, and so few fires occur from defective material. There are very many cotton mills in Shanghai and fires are not infrequent. These are usually due to foreign matter getting into the breaking-down machines, through which the cotton passes in a pressed or partially-pressed state. Rubber factories have in recent years sprung up in Shanghai following the large demand for rubber shoes of every description. These plants are mostly run by Chinese who use gasoline to dissolve the rubber for making up the shoes. It is very difficult to get them to appreciate the dangers in this business and to take precautions, which are more necessary than elsewhere. Chinese buildings converted into small factories, as a rule, house these plants. The manufacture of matches and fire-crackers has made considerable headway in Shanghai, with the result that the use of such explosives as chlorate of potash, saltpetre, have added to the danger of fire and actually caused a number of fires.

Arson is of frequent occurrence but difficult to prove, as the Chinese, in spite of stricter police control and fire precautions, are very clever in knowing what to do and what not to do when staging a fire of this kind. Hazardous goods are very carefully supervised and permits are issued by the Fire Brigade within the Settlement limits.

In Shanghai there are three types of houses, Chinese semi-foreign, and foreign. Chinese constructions must have fire-walls. There are still a few old buildings built prior to 1918 when these regulations came into force, but they are gradually being replaced by more modern houses. Where Chinese live there are always any number of alley-ways, and Shanghai is no exception. All alley-ways constructed since 1918 are provided with hydrants and pumping connections for fire-protection. In case of fire the fire-brigade pumps into these connections and takes the water from the hydrants near the fire. At present there are 633 pumping connections in the International Settlement.

One Company of the Shanghai Fire Brigade

Handling Fires in Shanghai

When a fire occurs, a crowd of Chinese always collect in a twinkling as if from nowhere, but they do not interfere, as they are confident that the Shanghai Fire-Brigade will be able to deal with the blaze. This also applies when the Brigade is called, as it sometimes is, to attend a fire in the Chinese-owned section of the town outside the Settlement boundaries. The Shanghai Municipal Council which operates the Shanghai Fire Brigade is, strictly speaking, confined to the Settlement and special rated areas where the roads are part of it. Persons who pay rates receive fire-protection. But one can never be quite certain where the roads run into Chinese territory, whether the fire happens to be in Chinese territory or in the International Settlement, and it is a general practice that should the Chinese require any assistance in fighting a fire in their own territory, the Shanghai Fire Brigade gives every aid, as there is always the danger that fires starting in Chinese territory may reach the International Settlement. The fire is the main consideration and the cooperation between the three fire brigades (Shanghai, French Concession, and Chinese) is excellent. There are no frontiers or politics in fire-fighting in Shanghai.

Equipment of the Shanghai Fire Brigade

The Shanghai Fire Brigade is equipped with all the latest methods and its machines are of the latest design. It has three 8-cylinder Studebaker operated pumps with a capacity up to 1,000 gallons a minute, and 7 Leyland and Merryweather units with 500-gallon pumps. The bodies, which are constructed in the Brigade's own workshops in Shanghai, are of a special design to meet local requirements. In England, for instance, a fire engine turns out with hose coiled up in the usual way, and then runs it out. In Shanghai, a machine lays the hose as it goes along the street and the water is turned on. The water reaches the fire almost as soon as the machine itself. For the important lay-ons, the Shanghai Fire Brigade uses 3½-inch hose, which is an inch larger than that used in most other departments. Chinese houses are of

Modern Machine Tools Are Installed in the Shops

flimsy construction and burn very quickly; hence the necessity of ample water and prompt hose streams. The Brigade has the usual fire-escapes up to 100 feet for high buildings. Another is being built which will be 142 feet in length to cope with the ever increasing height of buildings in Shanghai. In fact, Shanghai has higher buildings than there are in London. The top of the Cathay Tower which tops the Cathay Hotel is over 200 feet from the ground.

The Shanghai Fire Brigade supplies the fire-fighting crew for the Chinese Maritime Customs fire-boat. The Municipal Council has two fire-boats of its own for the protection of the Settlement's waterfront, fires on vessels, wharf frontage, gowowns (warehouses), etc. One of these fire-boats was formerly a submarine chaser converted in Shanghai to its present service. It is capable of pumping 4,000 gallons a minute at 120 pounds pressure, and the other 2,000 gallons a minute. The latter is modelled after the London fire-boat.

The Brigade has sixteen self-contained breathing sets of half an hour and two hours' duration. The men carry a supply of oxygen with them, and besides this every fireman is equipped with a smoke mask.

The Ambulance Service

The ambulance service of the International Settlement was formerly under police supervision. Recently it was transferred to the Fire Brigade. There are five very modern ambulance cars scattered among the various fire-stations in the Settlement, so that a three to four minute service is provided in this area. The traffic in Shanghai is becoming more and more congested and accidents are on the increase. General street accidents and emergency street calls are cared for by one of these ambulance cars in charge of a European officer with a Chinese crew. All the crews of these cars are trained in first aid work.

Roads in the International Settlement are excellent and one could not wish for anything better. Vehicles are able to go at full speed with every safety, if necessary.

Today the Shanghai Fire Brigade makes a great deal of its equipment in its own workshops. The shops are equipped with all the necessary machine tools, such as lathes, shapers, milling machines, etc. All the men in the shops are trained as firemen and when not engaged in fighting fires are occupied in the workshops. Here one may find carpenters, cabinet makers, pattern-makers, fitters, machinists, etc. Shoemakers make all the boots for the men, tailors their uniforms, carpenters the bodies of cars, ladders, and other woodwork. In brief, apart from the actual engines of the machines, practically everything else is made in the Brigade's own workshops in Hongkew Fire Station, one of the main stations in the Settlement.

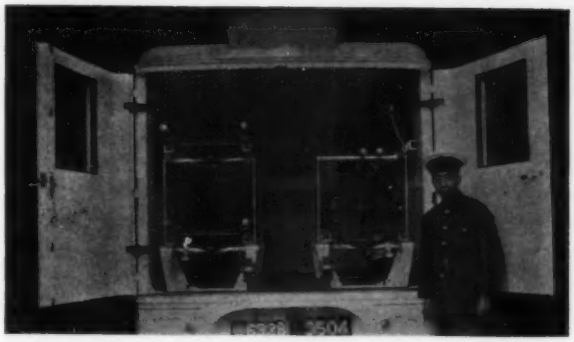
If a Chinese finds his house on fire, he generally tries to extinguish the blaze with water. If he finds he is unable to do it, he then tries to move his belongings while his neighbors will probably be watching. When he finds the fire making progress, a neighbor will suggest calling the fire brigade. A fire alarm system is not used in Shanghai, as climate conditions (extremes of heat and humidity) make it difficult to operate the very delicate electrical instruments required. At present, nine fire alarms are being tried out, tests being made with American, British, German, and Swedish instruments. For the time being, therefore, the Fire Brigade has to rely on the local telephone service and watch-towers, of which there are five with a man on duty twenty-four hours of the day, working in shifts. In the early days of the Settlement the watchman used to ring a big bell, which could be heard all over the Settlement, then rather small in area. Now, each watch-tower is equipped with telephone, a call going through within ten seconds.

Personnel of the Brigade

Firemen employed in the Shanghai Fire Brigade are drawn from the working class; some can read and write Chinese, others cannot. They are taken in as recruits and trained at Yangtszepoo training station for three months or longer, after which they have to undergo a stiff examination before passing out as Third Class Fireman. They are then transferred to any station where they may be needed. Their duties are more or less the same as those of firemen in other countries and include standing duty in theatres in the Settlement to see that they are not overcrowded. A very good Chinese fireman may be promoted to Second Class Fireman in two years. The average Chinese fireman is a very capable man and when led by his officers has no fear, is keen, and adaptable to almost any conditions. If left alone they lack initiative and do not seem to be able to think for themselves in an emergency. The First Class Firemen are experienced men and take their place on the apparatus as senior firemen, supervising the others. They may be promoted for good work and service to rank of Leading Fireman and then to Superior Fireman. The latter type fireman acts as liaison officer between the foreign officers and the station men. All Chinese who have attained superior rank speak English.

The uniforms of Chinese firemen are more or less the same as found in European cities. Leather helmets are used instead of brass, as brass is not considered strong

Assembling Fire Apparatus in the Brigade Shop



Interior of an Ambulance Car

enough nor proof against falling wires, etc. Firemen wear a one-piece suit made of imported waterproof fabric made up by Chinese tailors in the employ of the Fire Brigade. Leather and rubber boots are worn, the latter for use in places of amusements to avoid noise. The motor men are fitted with half Wellingtons to enable them to drive better.

Chinese firemen get ample opportunity for outdoor sport and they go in for volley ball, basket ball, but are keenest on volley ball. They play in the station compounds and occasionally have inter-station matches. They have few facilities for indoor games, for they are not favored, though one does find Mahjongg now and then.

They supply their own food and run a mess among themselves, paying a cook (who is usually a recruit fireman) a monthly fee for the cost of their rice, vegetables, pork, beans, and other Chinese foods. The Station has a kitchen and the wages of the cook are paid by the department. On reaching a certain pay scale, the men are entitled to a long leave of three weeks, once a year. The ordinary leave is granted in rotation and the usual average for a man is twenty-four to thirty hours in the course of a week. On festivals and holidays no drill takes place and in some stations one finds the men have erected a small joss place (place of worship) where they burn candles, joss paper, and incense. There is no union of firemen in Shanghai, no meddling with politics, and altogether the force, which consists of 500 firemen and officers, works in complete harmony.

CORRESPONDENCE

Selling the Department

To the Editors

I have been very busy speaking before civic groups at the rate of one a day, besides depending on the radio, motion pictures and other means to carry our message to all parts of the city. We have four fireman who are capable speakers and they have given extemporaneous talks quoting the necessary figures from memory. This has proven more effective than figures or information read from papers.

We have laid out a plan to sell the Fire Department using education as a medium. This plan, which is in operation, will run for a year. I am booked far ahead before civic groups. Because of our work, there will be no reduction in our Fire Department salary, personnel nor will any fire station be closed. It was a hard fight.

If I can be of service to other departments to promote the welfare of the men, I offer my services. Perhaps if every Fire Department in the country started a program of some kind to sell itself to the public, it would promote the profession and create better contact with the public.

We believe our plan is wide in scope and far reaching in results. It requires plenty of work from the Chief down and calls for the cooperation of the entire department in order that it be a success.

Yours very truly,
A. L. HEADLOUGH,
No. 3 Fire Station, Akron, Ohio

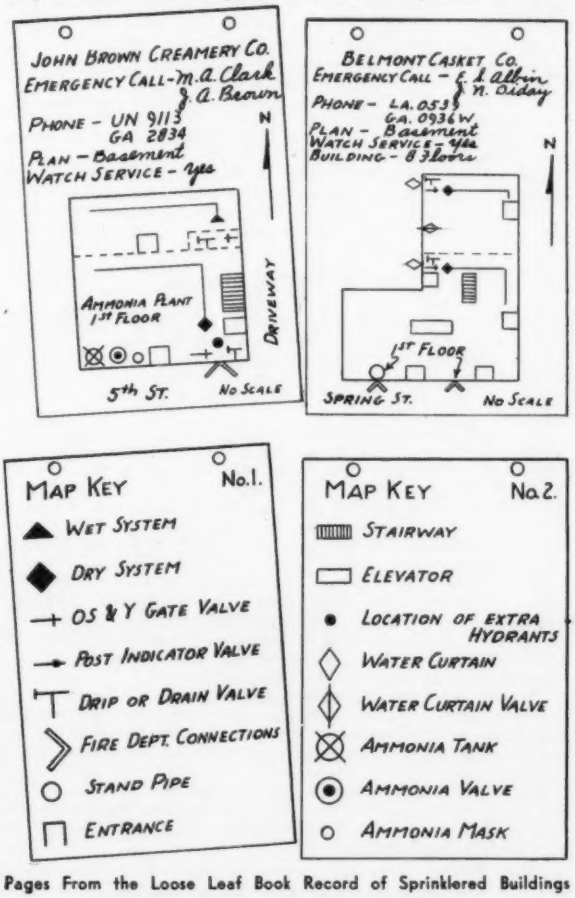
Plans of Sprinklered Buildings

To the Editor:

Since sprinkler systems are numerous in many cities, it is a problem for members to recall the location of the shut-off and drain valves. I have a plan which is now used by this company and has been found useful. In addition to sprinkler systems, it also takes care of ammonia plants.

The plans show the location of building, steamer connection, kind of system, O. S. and Y. post indicator, drain valves, extra heads, stairways, elevators, water curtain, water curtain valve, ammonia tanks, main shut-off valve for ammonia tank and ammonia mask. Each of these has a symbol. The sheets also show the names and telephone numbers of the owners or two employees who may be called for information. The sketches are made on sheets 2½ by 5 inches and are carried in a loose leaf type book on the apparatus. It is the duty of the driver of apparatus to bring this book with him when responding to a building which has a sprinkler system. This book is also used when the company has schools on sprinkler systems.

We have about fifty sprinkler systems in our first alarm district and of this amount, fifteen are in the area that we respond to as first company. I do not compel the members



Pages From the Loose Leaf Book Record of Sprinklered Buildings

of this company to remember all the fifty systems but ask them to remember the fifteen to which they respond as first company due. We can refer to the other 35 in the book.

Yours truly,
E. P. WELCH,
Chief, Columbus, Ohio.

Conclusion of Proceedings, Demonstrations and Exhibits at

New England Chiefs' Convention

By HARRY BELKNAP

Following is the conclusion of the report of the eleventh annual convention, New England Association of Fire Chiefs, held at Lewiston, Me., June 20 to 22:

THE Wednesday sessions of the convention were held at the armory. The morning program opened with the reading of the annual report of Secretary-Treasurer John W. O'Hearn. The records showed that there are 715 members in the association at the present time. During the past year there were 13 deaths and 75 members were dropped for non-payment of dues. The number of new members elected was 57. The cash balance on hand amounts to $20,996.22, these figures being as of before the convention.

Chief Selden R. Allen, of Brookline, Mass., First Vice-President of the International Association of Fire Chiefs, told of plans for the Great Lakes Trip and International Convention to be held from August 21-27 on the steamer "Seeandbee" with a two days' stop at the Century of Progress Exposition in Chicago.

Chief Allen introduced George Morley, who stated that under the National Industrial Recovery Act the way is paved for cities urgently in need of fire protection, especially new fire alarm systems, to obtain federal loans for such purposes.

Talk on Special Hazards

The first address on the program was by T. Z. Franklin, Manager of the Special Hazards Department, of the Automobile Insurance Company, of Hartford, Conn. There was to have been a paper by T. Alfred Fleming, of the National Board of Fire Underwriters, but illness prevented him from attending.

Mr. Franklin illustrated his talk by a series of highly spectacular demonstrations showing the force of a miniature dust explosion, using corn starch dust; the flash back of a stream of gasoline vapor, and a fire caused by a short circuited electrical device. He told of the hazards of flammable cleaning fluids and of Christmas tree decoration dangers. He then burned a celluloid doll to show the hazardous nature of some of the toys that are placed in the hands of children.

Mr. Franklin stated that spontaneous ignition is responsible for many mysterious fires. He explained oxidation causes heat to be generated faster than it can be carried off. He referred to two causes of these fires, one being bacterial action such as takes place in wet hay and the other being a chemical action between two substances.

The speaker demonstrated quick and delayed spontaneous ignition and closed his talk by showing how a careless watchman in a bleach mill might cause a fire by spitting tobacco juice on a floor saturated with bleach accidentally spilled.

The second paper was by James M. Hurley, State Fire Marshal of Massachusetts. This office was established in 1894. The State Fire Marshal is the executive head of the Fire Prevention Division.

Incendiary Fires and Arson Methods

The next paper was an address on "Incendiary Fires" by George O. Mansfield, Chief Fire Inspector, Department of Public Safety of Massachusetts.

Mr. Mansfield pointed out the importance of observation at fires and how clues might be obtained as to the identity of arson suspects. He mentioned the appearance of the smoke, the odors of various substances used to start fires, and showed how trailers are utilized to spread the flames from one room to another.

He said that during the past year seven men were burned to death while attempting to start incendiary fires in buildings in Massachusetts last year. He told of the town tax collector in Gloucester who hired a firebug to burn his house for insurance. He told of the methods used by the Marblehead Neck firebug who was found guilty and sentenced to 8 years for attempting to burn a summer residence. Mr. Mansfield told of the evils of over-insurance and described the several types of firebugs, the pyromaniac, the wayward youth, and the professional arsonists. He related exciting incidents in connection with the capture of men who had planned to set fire to a large summer hotel for the insurance.

At the close of the talk a large number of lantern slide views of photographs taken by state police were shown, the pictures clearly depicting the methods used by the incendiaries.

Wednesday Afternoon Session

The first business at the afternoon session on Wednesday was the report of the Auditing Committee which was made by Chief Oliver T. Sanborn, of Portland, Me., Past-President of the association and Chairman of the committee.

Secretary O'Hearn announced that there would be demonstrations at 4 p.m. by the Pyrene Manufacturing Company, the Stop Fire Company, Andrew J. Morse & Co., Lux-Fyre Freez Company, Arthur J. Blanchard Company and the forest fire truck from Richmond, Me.

The first speaker was William J. Carroll, of the Rockwood Sprinkler Company, of Worcester, Mass. He declared that the finest fire-fighting forces in existence are the municipal Fire Department and the automatic sprinkler. He then gave a detailed description of the new Sprink-Alarm, which is a system for connecting the sprinkler with the city fire alarm. He said that in 50,000 sprinkler fires over a period of 35 years 66 per cent of the fires were either extinguished or held in check by the sprinklers. Of this number 70 per cent were practically out and 27 per cent were under control when firemen reached the scene. The new system he described as faster and more efficient than the old systems and with less liability of sounding needless alarms because water surges and water hammer in the pipes cannot transmit an alarm.

Mr. Carroll described the dry pipe and wet pipe systems and pointed out that the Gamewell sprinkler watchman can be used with either system.

Advocates I. A. F. C. Fire Prevention Code

Chief Peter Steinkellner, of Milwaukee, Wis., was the next speaker. He advocated the adoption of a fire prevention code by the International Association of Fire Chiefs which could be universally used. He commended Massachusetts for its success in securing convictions in arson cases. He said that Chiefs and Fire Marshals should be free to act without fear of political interference. Over insurance, the Chief said, was the cause of more fires than anything else he knows of.

He advocated a change in the method of electing Directors of the International Association, saying that each sectional division should have a representative on the Board of Directors. He ended his remarks by saying that the New England Convention was the finest that he had ever attended.

Chief O'Hearn approved the suggestions of Chief Steinkellner and moved that the question of electing directors be brought up at the International Convention in August.

Chief William C. Mahoney, of Peabody, spoke regarding the tenure of office act for Chiefs.

Other subjects discussed briefly were fuel oil burner regulations and the hazard of gasoline tank trucks on the high-

People Who Were Much in Evidence at the New England Convention

Left—A group of Connecticut regulars. L. to R.—Chief L. F. Stowe, Milford; Chief John C. Moran, Hartford; Chief Thomas F. Burns, Bridgeport; Commissioners William O'Hara and F. W. Hunter, Milford; Lieut. J. J. Murphy, Bridgeport. Right—The convention's three big men. L. to R.—Commissioner Joseph Scannell, of Lewiston, who made a fine job of the convention arrangements; George Morley, of the Gamewell Company, seven feet tall and still growing; Chief Peter Steinkellner, of Milwaukee, Wis., specially invited guest elected to honorary life membership.

ways. Fire Marshal Hurley, of Massachusetts, said that new regulations to cover the situation were being drawn up.

Forest Fire Conference

The Forest Fire Conference was then held under direction of Chief Joseph W. Randlette, of Richmond, Me. The first speaker was Professor John M. Briscoe, of the University of Maine, who delivered an address on "Forest Fires and Education." The professor said:

"The general public seems to fail to grasp the seriousness of the situation. In Pennsylvania the Forestry Department has an excellent slogan 'Everybody loses when forests burn.' A proper and sympathetic public sentiment is needed and this can be obtained by use of posters, newspaper publicity, letters to civic groups, warning signs in the woods, and souvenir blotters and ash trays calling attention to the havoc caused by woods fires."

Prof. Briscoe described the special courses in forest fire protection given in the University of Maine, the general forestry course, and the courses leading to the Degree of Bachellor of Science in Forestry. He quoted figures from the Copeland report and showed the need for timber conservation.

The principal causes of woods fires in the east are carelessness and recklessness by human beings, while in the National Forests in the west lightning is the chief cause of fires.

Other causes of fires, the professor said, are recklessness in burning brush, camp fires neglected by picnic parties, railroads, and berry pickers.

He advocated a skilled and trained leadership and special courses of instruction for forest wardens.

Forest Fire-Fighting Equipment

John P. Crowe, Ex-Chief of Westboro, and Assistant State Fire Warden of Massachusetts, spoke on "Forest Fire-Fighting Equipment and Prevention of Woods Fires." He stated that he was pleased to see the New England Association devoting a session to forest fire problems and hoped that the International Association would do likewise. He declared that automobile picnic parties caused many fires as the average city dweller is ignorant of the woods. He said airplanes were a new hazard and that five forest fires this year were caused by airplanes.

Chief Crowe brought greetings from Maxwell C. Hutchins, Massachusetts State Fire Warden, who was unable to be present. The use of back-fires was condemned by Chief Crowe except as a last resort. He told of the efficiency of motor pumps and urged all Fire Chiefs to also act as forest wardens.

Charles F. Young, District Forest Warden of New Hampshire, spoke on "Forest Fires in New Hampshire" and Austin H. Wilkins, of the Maine Forestry Service, told of "Forest Fires in Organized Townships."

Because of duties in connection with the Civilian Conservation Corps, Neil Violette, Maine Forest Commissioner, was unable to address the convention.

The last speaker on the program for the day was A. A. Cushman, of Keene, N. H., who spoke on "Forest Fire Pumps."

In the evening there was a 10-act vaudeville show in the armory under direction of Jack Kenney, Manager of the Auburn Theatre, assisted by "Sandy" Chapman. The show was followed by dancing.

Election of Officers

On Thursday morning the convention came to a close with the reading of reports and election of officers for the ensuing year.

Secretary O'Hearn read a letter from Alfred N. Miner, Chairman of the Massachusetts State Fire Prevention Committee, who was unable to be present in person.

Chief Selden R. Allen reported for the Committee on Courtesies and George W. Austin for the Committee on Registrations and Reservations. The total attendance at the convention was 429.

Fire Commissioner Joseph W. Scannell, of Lewiston, was elected an honorary life member of the association. Ex-Chief William C. Shepard, of Pittsfield, Mass.; and Chief Peter Steinkellner, of Milwaukee, Wis., were also made honorary life members.

It was voted to hold the 1934 convention in Burlington, Vt. The officers chosen were as follows: President, Chief Daniel B. Tierney, Arlington, Mass.; First Vice-President, Chief John S. Pachl, Annex F. D., New Haven, Conn.; Second Vice-President, Chief David A. DeCourcy, Winchester, Mass.; Secretary-Treasurer, Chief John W. O'Hearn, Watertown, Mass.; Sergeant-At-Arms, Chief John J. Kennedy, Bryant Electric Company, Bridgeport, Conn.

Demonstrations

On Wednesday afternoon, June 21, demonstrations were held on the street and in the vacant lot opposite the armory. The firms represented in these tests were the Arthur H. Blanchard Company, Andrew J. Morse & Son, Pyrene Manufacturing Company, Stop Fire Company, Lux-Fyre Freez Company, and Charles Niedner's Sons Company. The new forest fire truck of the Richmond, Me., Fire Department was on exhibition and gave several demonstrations.

Pits were dug in the vacant lot and filled with gasoline to show how fires of this nature could be quickly extinguished Shallow pans of gasoline were also used in some of the tests. Before the gasoline was ignited a hose line was run from Engine 5, of the Lewiston Fire Department, under direction of Captain Zepherion Drouin and Lieutenant Charles Whitehouse. This piece of apparatus is a 400-gallon Maxim motor pumper and combination wagon. It was also used to furnish streams for a demonstration of the new Morse Invincible nozzles and portable deck guns.

Tests were held of Pyrene extinguishers, a new type of gas extinguisher, foam streams, and carbon dioxide extinguishers. The Neidner firm displayed a new type of knapsack canvas bag for carrying forestry hose. The Blanchard Company showed the powerful stream that may be obtained from a Morse nozzle with 1½-inch tip. Water was supplied by two hose lines from Engine 5 which was connected to a hydrant at the corner. The Pacific Marine Company's portable gasoline pump for forestry work was also demonstrated.

Fire Commissioner Joseph Scannell, Chief Reuben D. Estes, of Lewiston; Reserve Deputy Chief Edgar E. Ramsdell, Harry J. Lovell, and Harold W. DeVeer had general charge of the tests which were witnessed by a large crowd.

The Exhibits

The state armory in Lewiston, with its wide and spacious floor, provided an ideal setting for the exhibition of fire department supplies, apparatus, and accessories. Although there were no hook and ladder trucks on display this year and only four motor pumping engines, the lack of large motor equipment was made up for by the varied collection of smaller and attractively arranged exhibits. The meeting hall, where all the convention sessions, except the opening memorial exercises, took place, was situated in the armory, opening from a hall at the side of the main hall.

The Maxim Motor Company, of Middleboro, Mass., showed two handsome motor pumping engines, one of a capacity to pump 1,000 gallons of water per minute and one of 750 gallons per minute capacity. The exhibit was in charge of A. F. Alger, Sales Manager, and W. A. Shaw, Service Manager.

A Mack 750-gallon centrifugal motor combination pumping engine with 100 gallon booster pump and capacity for carrying 1,200 feet of 2½-inch hose was shown by the Mack Motor Truck Company. E. C. Fenner, of New York City, was in charge.

A small motor pumper and hose combination mounted on a Ford chassis was shown by the Wade & Dunton Motors, of Lewiston. The pumper had a capacity of 300 gallons per minute and was in charge of Ralph Haskell.

The Gamewell Company, of Newton, Mass., was represented by Frank M. Tiffany and William Phillips. The display consisted of two of the latest type three-fold succession fire alarm boxes, which will sound an alarm even when a wire is broken. Punch recording registers and tapes were also shown.

The Gorham Fire Equipment Company, of Boston, Mass., had a fine display of fire fighting equipment including Atmos Inhalators, Wheat lights, Burrell All Service Gas Masks, automobile name plates, safety lamps, chimney tongs, and pump cans for use in fighting grass and woods fires. Joseph T. Gorham was in charge.

The American-LaFrance & Foamite Industries, Inc., had an extensive showing of fire equipment, hose, lights, and supplies including the new LaFrance Warner hose shut-off. The representatives at the convention were Leslie J. Creaser, New England District Manager of Fire Equipment Sales; James P. Winchell, Maine Representative; Stephen R. Jones, New Hampshire Representative; Harris Hunt, Connecticut Representative; Captain W. N. Crowell, and Joseph P. Webber, of Boston, New England District Manager of Motor Apparatus Sales. Foamite generators, LaFrance nozzles, Goodyear hose, Oxford metal polish, and LaFrance inhalators and gas masks were among the goods displayed in the LaFrance booth.

The Arthur H. Blanchard Company, representing the New England Fire Hose Division of the Boston Woven Hose & Rubber Company, of Cambridge, showed fire hose, Pacific pumps for forestry and town protection, and a line of fire department supplies including the Eastman deluge gun, coupling, and foam charges. The booth was in charge of Arthur H. Blanchard, Edward L. Blanchard, and Linden Brule.

Andrew J. Morse & Son, of Boston, showed the Morse portable nozzles and play pipes, couplings, gates, rescue outfits, and diving equipment. C. E. Gorman and E. W. Sibley were in charge.

The American Fire Equipment Company displayed a complete line of fire department supplies including equipment for fighting forest fires. John J. Scully, of Boston, was in charge.

Harry J. Lovell, of 109 Brookline Avenue, Boston, had an exhibition of B. F. Goodrich fire hose, Goodrich tires, boots, rubber coats, and flash lights. In this booth there was an interesting display board showing crude rubber and different stages in the manufacture of fire hose.

The Homelite Corporation, of Portchester, N. Y., exhibited a 1,250-watt generator that weighed only 86 pounds, also 2-inch self priming pumps, and Crouse-Hinds searchlights. R. M. Lawton, New England Factory Representative, was in charge.

The Amesbury Metal Products Company, of Amesbury, Mass., showed fire apparatus lighting equipment including red flashers and flood lights. John Killduff was in charge.

The latest types of Lux and Fyre Freez extinguishers were shown by Harold W. DeVeer, of the Lux-Fyre Freez Company, of Boston, and P. W. Eberhardt, of Walter Kidde & Co., of New York. An interesting item on display was the new Lux Fyre Freez water conversion unit showing the method of changing soda and acid tanks to water using CO_2 for pressure. The Kidde water and carbon dioxide units were shown and there was a display of motion pictures which attracted crowds to the booth.

Louis W. Bills, of Lexington, Mass., had a fine display of fire alarm equipment including pedestals, red lights, fire alarm boxes, punch registers, and Cunningham air whistles.

The C. G. Braxmar Company, of New York, had a very striking display of fire and police badges of all kinds, sizes, and shapes. John O. Veit was in charge.

The Colonial Badge Company, of Providence, R. I., showed badges and rank emblems for use on uniform coats, also name plates. Gordon Johnson was in charge.

The Hodges Badge Company, of 166 Essex Street, Boston, Mass., showed badges and insignia. Frederick J. Hodges was in charge.

The Justin A. McCarthy Company, of Boston, showed Manhattan Fire Hose, M and M siphons, Cooper hose jackets, play pipes and nozzles, axes, fire hats, and a complete line of supplies. Justin McCarthy and Franklin W. Haines were in charge.

The D. B. Smith Company, of Utica, N. Y., showed their famous Indian forest fire pumps, including the latest type of 5-gallon can, with form fitting ventilator shield to prevent moisture and cold from being felt by the person carrying the pump. Thomas M. Burton was in charge.

Charles Niedners' Sons Company, of Malden, Mass., displayed Red Chain Forestry Hose. A. L. Niedner was in charge.

The Mine Safety Appliances Company exhibited the H and H inhalators, Burrell all service gas masks, M. S. A. ammonia masks, protector hats, and oxygen breathing apparatus. Alfred Kinsella was in charge.

Other exhibits were as follows: Reo cars shown by the Darling Automobile Company; quart size gas type extinguishers shown by Stop-Fire, Inc., of 621 East 216th Street, New York City, represented by J. Preston Miller; firemen's coats and quick hitches, shown by the Midwestern Manufacturing Company, of Mackinaw, Ill., represented by I. A. Luft; firemen's uniforms, coats, caps, and badges shown by Wallace Brothers, of Portland, Me., represented by William W. Wallace; Vio Gen treatment for burns shown by F. E. Burnham, of West Medway, Mass.; oil of salt for first aid, rubber hats, and Bullard first aid kits shown by the Direct Sales Company and E. D. Bullard Company; fire hose manufactured by the Fabric Fire Hose Company, of Sandy Hook, N. Y., represented by Robert Many; firemen's uniforms and caps shown by the Rosenfield Uniform Company, of Boston, Mass.; Pyrene and Phomene extinguishers shown by the Pyrene Manufacturing Company, of Newark, N. J., represented by C. J. McClasken; waterproof paints shown by the Bauer Hardware Company; and Maine mill products shown by the Worumbo Manufacturing Company and the Androscoggin Bates Hill Company. Highland Springs beverages and popcorn completed the exhibits.

On Tuesday evening there was a concert in the armory by Kora Temple Shrine Band, followed by dancing, with music directed by Dwight F. Marble, and on Wednesday evening there was a 10-act vaudeville show staged by Jack Kenney and Charles "Sandy" Chapman.

Snapped at the New England Fire Chiefs' Convention

Left—Representatives of the Fabric Fire Hose Company. L. to R.—L. R. Meaney, J. H. Ringers (Treas.), P. A. Wood, Robert Many (N. E. Mgr.), R. M. Wood. Right—L. to R.—Chief W. S. Mason, Bangor, Me.; A. L. Cowles, Eureka Fire Hose Mfg. Company; Chief H. J. "Pat" Monohan, Berlin, N. H. (President, N. H. Fire Chiefs' Club).

The Exhibit Committee was composed of Edgar E. Ramsdell, Reserve Deputy Chief, Lewiston Fire Department, Chairman; Chief George C. Bancroft, of Auburn, Me., and Harry J. Lovell, of Boston.

Blaze Proves Value of Fire Stops

The importance of having fire stops at floor levels in the structural iron H channels, was pointed out by William B. White, Chief Engineer, New York Board of Fire Underwriters who used the fire in the Terris Garden's Apartments, Flushing, Long Island, as an example. In this fire one life was lost.

The blaze started in a fourth floor apartment and it spread through an H-channel column past the fifth and sixth floors. It continued up the channel, similar to a flue, for there were no fire stops at floor levels. The fire spread to a blind attic about two feet high which covered the entire building. Firemen had little difficulty in extinguishing the blazes in apartments, and tenants were permitted to return to their rooms. Then it was discovered that the blind attic was involved. Extreme difficulty was encountered in reaching this spot. Four alarms were sounded. Before the fire was out it had caused $106,000 damage to the building.

Mr. White urged that interior partition walls be extended to the top of the roof boards and that openings be provided to permit access to blind attics.

Chief Kailor Not With League

Chief James D. Kailor of Columbus, Ind., has written that several months ago the Indiana Police and Firemen's Civil Service League was formed in Indiana. He desires to inform his friends that he has requested the league to discontinue using his name as being associated with it.

Hartsville, S. C., has purchased a 1,000-gallon pumper. H. Leland Law is Chief of the Department.

J. W. Strohm, Fire Marshal of Iowa, listed chimney fires as the most common cause of fires in the state. During the six months which ended July 1, sparks from chimneys caused $358,600 fire damage. Next to chimney sparks, defective flues caused the most damage with defective wiring as the third chief cause. Defective flues caused damages totaling $328,749.

Chiefs Who Attended the Annual Convention of the New England Fire Chiefs' Association

Allen, Selden R., Brookline, Mass.
Ayer, H. D., Fairfield, Me.
Bacon, J. Ralph, Weymouth, Mass.
Bancroft, George C., Auburn, Me.
Bartlett, Ernest N., Billerica, Mass.
Batchelder, Earl H., Centerdale, R. I.
Berry, W. A., ex-Chief, Danvers, Mass.
Berry, W. W., ex-Chief, Waterville, Me.
Bills, Louis W., Supt. Fire Alarm, Lexington, Mass.
Bonner, Robert J., Westerly, R. I.
Brown, Frederick A., Apponaug, R. I.
Brown, George W., South Berwick, Me.
Brown, Walter H., Bridgton, Me.
Burns, Thomas F., Bridgeport, Conn.
Butler, James H., Berwick, Me.
Casey, James M., Cambridge, Mass.
Charlesworth, Frank, Providence, R. I.
Chase, Raymond C., Rollinsford, N. H.
Connell, Harry J., Hudson, N. H.
Cote, A. J., Woonsocket, R. I.
Cressy, John, Beverly, Mass.
Crowe, John P., ex-Chief, Westboro, Mass.
Crowley, Roger, Manchester, N. H.
Cushing, Raymond F., Bucksport, Me.
DeCourcey, David H., Winchester, Mass.
Deslauriers, Theodore, Ware, Mass.
Dickinson, Frank F., Brockton, Mass.
Donnelly, T. H., West Hartford, Conn.
Doyle, Irvin T., Brewer, Me.
Earley, Charles D., Turners Falls, Mass.
Eldridge, John F., Kennebunkport, Me.
Estes, Reuben E., Lewiston, Me.
Fahey, Joseph J., Milford, Mass.
Ferris, Herbert, Greenfield, Mass.
Fortier, Henry E., Manville, R. I.
Fortin, Charles E., ex-Chief, Lewiston, Me.
Foy, Albert B., South Manchester, Conn.
French, Charles H., Manchester, N. H.
Galvin, Thomas F., Com'r Public Safety, Lawrence, Mass.
Gisborne, F. R., Sound Beach, Conn.
Gray, Joseph D., Bridgeport, Conn.
Hammond, Irving C., Westport, Mass.
Hanmer, Henry F., Wethersfield, Conn.
Happny, William T., Concord, N.H.
Hill, Charles E., Cape Elizabeth, Me.
Hogan, Walter E., Orono, Me.
Holmes, J. Harry, Milton, Mass.
Huart, V. C., Farmington, Me.
Hurd, G. Walter, Oldtown, Me.
Hurley, James M., State Fire Marshal, Boston, Mass.
Hurley, Patrick J., Holyoke, Mass.
Hutchinson, Edward J., Boothbay Harbor, Me.
Inkley, Clyson P., Rockland, Mass.
Johnson, Robert H., ex-Chief, Holden, Mass.
Jones, Weston B., Sabattus, Me.
Joy, Mellen R., Saugus, Mass.
Kelley, Joseph E., Danvers, Mass.
Keenan, Leo V., Mars Hill, Me.
Kerrigan, T. Martin, ex-Fire Com'r, Lewiston, Me.
Kitchen, Louis E., Rutland Heights, Mass.
Koltonski, Alfred H., Rutland, Vt.
Lane, Charles E., Orange, Mass.
Lawton, M. W., Middletown, Conn.
Lewis, Percy R., Ashland, N. H.
Lovejoy, Grover D., Waterville, Me.
Mahoney, W. C., Peabody, Mass.
Mansfield, George O., Chief Fire Inspector, Boston, Mass.
Mason, W. S., Bangor, Me.
McGlauflin, Floyd E., Presque Isle, Me.
Melendy, Albert C., Nashua, N. H.
Mercier, Solomon A., Rumford, Me.
Miguel, Manuel S., Manchester, Mass.
Miller, Dean H., Ashland, Mass.
Milne, George B., Rockville, Conn.
Mitchell, Melvin P., Hudson, Mass.
Moran, John C., Hartford, Conn.
Moroney, John F., Meriden, Conn.
Monahan, H. J., Berlin, N. H.
Neary, John H., Natick, Mass.
Newman, Frank C., Melrose, Mass.
O'Connor, James F., ex-Fire Comr., Everett, Mass.
O'Hearn, John W., Watertown, Mass.
Oliver, John T., Marblehead, Mass.
Ouellette, Joseph H., Saco, Me.
Pachl, John S., New Haven, Conn.
Palmer, John A., Torrington, Conn.
Partenhemer, Phillip, ex-Chief, Greenfield, Mass.
Patt, Irving F., ex-Chief, Central Falls, R. I.
Payson, Allen F., Camden, Me.
Persons, Varney P., Montpelier, Vt.
Pierce, Walter, ex-Chief, Arlington, Mass.
Qualey, Thomas, Medford, Mass.
Randlette, J. W., Richmond, Me.
Reynolds, Chas. A., Willimantic, Conn.
Ricker, Eugene T., Biddeford, Me.
Sanborn, Oliver T., Chief, Portland, Me.
Savage, John A., Valley Falls, R. I.
Scannell, Joseph W., Fire Comr., Lewiston, Me.
Shea, Michael J., Fitchburg, Mass.
Shipman, Thomas H., New London, Conn.
Slaman, T. H., Wellesley, Mass.
Smith, Geo. W., ex-Chief, Wakefield, R. I.
Spear, Chas. O., Jr., So. Portland, Me.
Steinkellner, Peter, Milwaukee, Wis.
Stockwell, Carl, Burlington, Vt.
Stowe, Louis F., Milford, Conn.
Sullivan, Francis A., Lawrence, Mass.
Taft, Henry R., Norwich, Conn.
Tappen, Robert M., Gardner, Mass.
Thorne, Clark C., Millis, Mass.
Tierney, Daniel B., Arlington, Mass.
Titus, William E., ex-Chief, Pawtucket, R. I.
Tracey, Frank E., Woburn, Mass.
Walsh, Peter E., ex-Chief, Boston, Mass.
Welch, William F., Lynn, Mass.
Whiting Homer B., Hampton Beach, N. H.
Woodward, A. P., Danielson, Conn.
Young, Charles F., N. H. Forestry Dept., Nashua, N. H.
Young, Daniel F., Cranston, R. I.

Associate Members at the Annual Convention of the New England Fire Chiefs' Association

Abbott, William F., Boston, Mass.
Alger, Fred B., Middleboro, Mass.
Allen, E. W., Medfield, Mass.
Austin, George W., Boston, Mass.
Barnes, George L., Auburn, Me.
Barter, Miles F., Boothbay Harbor, Me.
Belknap, Harry, Boston, Mass.
Breslin, Charles J., Watertown, Mass.
Brooks, E. W., Boston, Mass.
Burt, Geo. C., Burlington, Vt.
Burton, Thos. M., Utica, N. Y.
Carolan, Lawrence, Jr., Chelsea, Mass.
Carroll, William J., Worcester, Mass.
Chapman, Charles "Sandy", Revere, Mass.
Charnock, P. C., Boston, Mass.
Clark, L. N., Newton, Mass.
Cowles, A. Lee, Boston, Mass.
Creaser, L. J., Boston, Mass.
Curtaz, Charles J., West Roxbury, Mass.
Day, John H., Lynn, Mass.
deVeer, Harold W., Boston, Mass.
Devine, John R., Worcester, Mass.
Dwyer, John T., New York City.
Fahey, Wm. J., Lewiston, Me.
Fenner, D. C., New York City.
Fogarty, Michael, North Providence, R. I.
Geyer, John, Chelsea, Mass.
Gillis, A. C., Arlington, Mass.
Gorham, Joseph T., Boston, Mass.
Gravelle, Charles L., Woburn, Mass.
Hinkley, J. A., Richmond, Me.
Hodges, Frederick J., Boston, Mass.
Hyland, D., Ware, Mass.
Johnson, Gordon W., Providence, R. I.
Kinsella, Alfred, Belmont, Mass.
Kirk, Kenneth A., Lewiston, Me.
Lawrence, Edward W., Worcester, Mass.
Liscomb, John I., So. Portland, Me.
Lovell, Harry J., Portland, Me.
McAlary, Walter, Walterville, Me.
McCarthy, Justin A., Boston, Mass.
McLaughlin, J. A., Boston, Mass.
McLaughlin, Daniel F., Providence, R. I.
McClaskey, Clarence J., Malden, Mass.
McLean, Walter E., Allston, Mass.
McCorkle, W. J., Boston, Mass.
Moloy, James E., Woburn, Mass.
Morley, George E., Newton, Mass.
Moulton, E. G., Worcester, Mass.
Nichols, Leon A., Barrington, R. I.
Patt, Everett I., Central Falls, R.I.
Potter, Stuart M., Sound Beach, Conn.
Pratt, Herbert K., Bridgewater, Mass.
Provencher, Arthur D., Lewiston, Me.
Ramsdell, Edgar F., Lewiston, Me.
Richardson, Irving F., Medford, Mass.
Rustic, J. B., Boston, Mass.
Ryan, James J., Newton, Mass.
Sanger, John J., Sound Beach, Conn.
Scully, John J., Boston, Mass.
Shaw, Daniel T., Portland, Me.
Shaw, M. A., Middleboro, Mass.
Sheehan, Frank, Newton Centre, Mass.
Skelton, Harold N., Lewiston, Me.
Sturges, William, Ridgefield, Conn.
Taylor, George F. C., New York City.
Tedford, Kenneth E., Lewiston, Me.
Tiffany, F. M., Newton Upper Falls, Mass.
Veit, J. O., New York City.
Wallace, Wm. W., Portland, Me.
Warren, Ira A., Danielson, Conn.
Webber, Joseph A., Boston, Mass.
White, Charles A., Augusta, Me.
Williamson, Edward E., Boston, Mass.
Wood, Phillip A., Boston, Mass.
Wood, Robert M., Boston, Mass.

Questions and Answers

NOTE—Readers are invited to send in questions, which will be answered in the order received. Names are omitted from questions unless otherwise specified

Spontaneous Ignition

To the Editor:

The question has come up in our "Round Table" discussions about "Spontaneous combustion." Some of our men say there is no such thing as "spontaneous combustion." They claim that if you use the word "spontaneous" that it should be phrased "spontaneous ignition." They state that the word "combustion" should be used by itself.

Several years ago I read an article in FIRE ENGINEERING on this subject but am a little bit hazy as to the subject. Will you therefore, answer this question?

B. J. C.

Answer: The term "spontaneous combustion" is a misnomer. The spontaneous feature about combustion is ignition. Once the material begins to burn, the chemical process involved is termed combustion, irrespective of the cause thereof.

Ventilation and Gases

To the Editor:

We are in possession of a list of True and False Statements and among them appears the following which are not entirely clear or that we are not positive concerning the correct answer. Would you kindly give your version in regard to same?

Question 72—The theory of ventilation is practically comparable with the flow of water inverted.

Question 85. Ventilation of basements and cellars introduces another angle, as in many cases there is only one entrance, and that from the inside of the building. When this condition occurs, it is obvious no ventilation should be attempted until lines are brought into position.

Question 98. Incomplete combustion causes back-draft, and a fire inside a closed building uses up most of the oxygen in the air, but the heat continues to distill off inflammable gases, mostly in the form of carbon monoxide. In other words, the building becomes a huge gas plant charring the combustible material and producing gas, which is highly heated, often to above the temperature of ignition, and only needs a supply of fresh air to furnish enough oxygen for it to burst into flame or explode.

L. H. B.

Answer: Question No. 72 is not very well worded. What the party who prepared this question probably had in mind was that the action of gases in a building on fire is the reverse of that of water in a container. If the top of the building is open, the gases will flow out, while if the bottom of a water container is open, the water will do likewise. If this is a false and true question, it should be answered "true."

Questions Nos. 85 and 98 should also be answered "true."

Ordinarily where a basement is to be ventilated, and there is only one entrance to the basement, and this is inside the building, the usual procedure is to tear up a board in the floor and thus secure ventilation, opening windows at the front and rear of the building at the same time. Of course, it is necessary that lines be in position to prevent extension of the fire when the floor board is removed.

The theory of back-draft is approximately as described in Question No. 98. When a fire has been smoldering, and a door or other opening is made in the building, a supply of fresh air may enter, providing the necessary oxygen for rapid combustion of the stimulated, unburned gases. The result is a blast of heated air, smoke, and sometimes flames, from the confined area.

Calculating Nozzle Pressure

To the Editor:

Would you please solve the following for me:

What is the nozzle pressure on a line 500 feet long, aloft 36 feet, 30 lbs. hydrant pressure, 1⅛-inch nozzle used. I maintain it is about the vanishing point. Also:

A line 500 feet long is throwing an effective stream from the ground into a third story window. Allowing 11 feet to the story, what distance would the nozzle have to be from the building? What is the nozzle pressure required for such a stream? What is the pump pressure? A 1⅛-inch nozzle is used.

Answers In determining the nozzle pressure on the layout in your first problem, where the nozzle is 36 feet above the hydrant, we must first subtract the back pressure from the available hydrant pressure to secure the hydrant pressure which will be left for overcoming friction loss in the hose and giving nozzle pressure.

36 x .434 = 15.6 pounds back pressure.

Hydrant pressure, 30 pounds — 15.6 = 14.4, the pressure remaining and which is available for overcoming friction loss and giving nozzle pressure.

Then find the nozzle pressure, using this figure as your engine pressure:

N.P. = E.P. ÷ (1.1 + K.L.)
= 14.4 ÷ (1.1 + .167 x 10)
= 14.4 ÷ (1.1 + 1.67)
= 14.4 ÷ 2.77 = 5.2 pounds. In other words, the nozzle pressure will be 5.2 pounds.

In the second problem the nozzle should be placed away from the building a distance at least equal to the distance measured from the street up to the point of the building where the stream crosses the window sill.

Assuming 11 feet per floor and 3 feet for the height of the sill we have a total height of 25 feet. This is the distance away from the building that the nozzle should be placed. A greater distance would probably give better results, but the 25 feet is a minimum distance. Then an additional 10 feet, approximately, will be required for penetration.

The total length of the stream from the nozzle to the point where it strikes the ceiling will thus be 35 plus 10, or 45 feet approximately. (35 feet is the distance from the nozzle to the sill.)

With a nozzle pressure of 45 pounds, we calculate engine pressure (hydrant pressure) by the usual formula:

E.P. = N.P. x (1.1 + K.L.)

Substituting values, we get E.P. = 45 pounds x (1.1 + .167 x 10)

= 45 x 2.77 or 124.67 pounds.

This is the engine pressure necessary to provide a nozzle pressure of 45 pounds.

Bangor Ladders

To the Editor:

Will you please define a Bangor ladder. We have had considerable discussion on this item.

D. C.

Answer: The original Bangor ladder was made in Bangor, Maine, and it was made of Maine spruce lumber of which there is no more to be had for ladders. It was the first extension ladder to have a winch hoist for the fly ladder, and a chain was used instead of a cable or rope, as is used now. It was a solid side extension ladder, and the first long extension ladder to successfully use stay poles and automatic

locks for fly ladder. It was not a truss ladder. Forty years ago, a fire department was not complete unless it had a Bangor ladder; it was then about the only long extension ladder on the market. Today the term "Bangor ladder" is commonly applied to the solid side extension ladder.

WHITE PLAINS, N. Y., DEPARTMENT HAS EFFICIENT RESCUE SQUAD

Members, Besides Being Thoroughly Instructed in First Aid Work, Have Also Taken Water Life Saving Instruction

By Captain David J. Yates

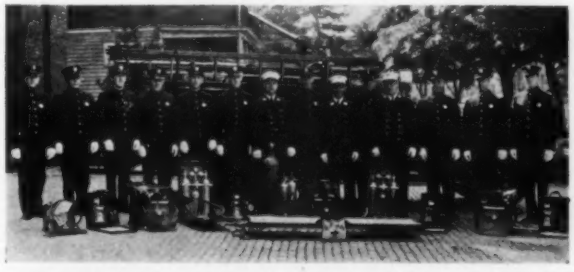
Director of First Aid and Life Saving, Westchester County Chapter, American Red Cross

A MORE enthusiastic unit cannot be found anywhere in the country than this group of the White Plains Department. This department's efficiency in all-around rescue work, besides its unquestioned ability as a fire-fighting unit, gets its inspiration from their progressive and interested Chief, H. Abbot Griffen.

The writer has yet to experience in his long activities in the safety field—which incidentally reaches over a period of nearly twenty years—better team work than is maintained among the men and the splendid spirit of cooperation between the head of the department, right down clear through to the ordinary fireman.

Since July 1, 1931, until July 1, 1932, this outfit has many outstanding or meritorious acts of First Aid which speak for themselves. During this period they had 18 cases which included such acts as resuscitation of attempted suicide, babies smothered by pillows and blankets, men burned by illuminating gas explosions, firemen overcome by smoke, man burned washing motor with gasoline, woman burned by fire on arms and face and four drowning resuscitations.

All the men of the squad have had approximately 20 hours first aid instruction. Captain Barlie, Lieutenant Van Scoy and Lieutenant Clow are qualified First Aid Lay Instructors, which permits them to give any of the required courses in First Aid to new members and to volunteers in other departments.



White Plains, N. Y., Fire Department Rescue Squad

Reading from left to right, the members in the picture are: D. Conroy, Archibald Noble, Francis Doyle, George Martin, Ernest Purdy, George Mercer, Harry Robbins, John Klipper, Louis Baker, Clark Douglass and Harold Douglass. In the centre are Lieutenant Earl Clow, Captain George Barlie and Lieutenant Henry Van Scoy.

The following men of the White Plains Department have had twelve hours Life Saving Instruction and have received certificates: Captain Barlie, Clark and Harold Douglass, Francis Doyle, Archibald Noble, George Martin and H. A. Griffen, Jr.

Even on their off days, these men are always available. Typical of this type of cooperation with other departments, is the following letter received from the Valhalla Fire Department Company No. 1:

"At our last meeting, it was the wish of our Company to express to you our appreciation of the valuable service rendered by Fireman William Dearman of your Department at a fire in the home of Mrs. Hubbard in Valhalla. We feel that but for his aid, the injuries which Mrs. Hubbard sustained would have been worse than they were and we take pleasure in complimenting you in having in your service a man like Fireman Dearman."

Besides being well-trained First Aiders, a number of the men under Capt. Barlie's leadership, have taken intensive volunteer water life saving instruction. This same group are especially well trained in ice rescue work and have been frequently called upon during the last winter to lend assistance even out of their own jurisdiction.

Capt. Barlie and Fireman Clark Douglass participated in the Fourth Annual New York Safety Conference held at the Pennsylvania Hotel in New York City, March 1 and 2. This unit represented Westchester County as a fire fighting unit in the First Aid Session, where nine teams, made up of various Utility Companies and Police Departments, demonstrated how a First Aider performs in action.

Capt. Barlie, Lieut. Henry Van Scoy and Lieut. Earl Clow are all qualified Lay Instructors, having had as a minimum 36 hours of instruction and having received 18 hours recently of renewal work under Dr. W. J. Fenton, American Red Cross National Staff Physician from Washington, D. C.

Capt. G. W. Barlie carried on an intensive First Aid course with 14 members of the Katonah, N. Y., Volunteer Fire Department. This department met each Tuesday night from 8 to 10, and continued taking the work until nine sessions were completed. Capt. Barlie did this on his own time, voluntarily.

N.B.F.U. Cooperates with I.A.F.C.

The National Board of Fire Underwriters is affording real cooperation with the members of the International Association of Fire Chiefs, as well as other chiefs throughout the country. The engineering reports issued on various cities, outlining necessary improvements in fire protection, will serve as a background for cities securing federal appropriations for public works construction designed to improve fire protection. The National Board had a representative at the recent Convention of the American Water Works Association in Chicago, and offered their facilities in interesting Federal and District Administrators of Public Works in fire protection improvements.

In addition, the National Board is sending to the Convention this year in Cleveland, aboard the "Seeandbee" their Engineer of Fire Prevention, Chief Jay W. Stevens, Executive Secretary of the Association. Despite the necessity of cutting expenses at every turn, the National Board feels that this cooperation with the fire chiefs is deserved, and will prove mutually helpful.

Claibourne Heads Indiana Chiefs

Chief William Claibourne, Logansport, was elected President of the Indiana Fire Chiefs' Association, at its convention held in Logansport, June 22-23.

The program included a talk by Raymond Coon on "Cooperation With the Association"; "Why Fire Prevention is Essential to Fire Departments," by C. S. Steup, Engineer, Indiana Fire Inspection Bureau; "Fire Department Hydraulics," by Lewis A. Vincent, National Board of Fire Underwriters; "Training Firemen," by George K. Wells, State Supervisor of Industrial Instruction.

There was a demonstration of apparatus by the Boyer Fire Apparatus Company, barbecue at the farm of the Izaak Walton League, tour of the city and the state hospital, dance at the Logansport Country Club and a theatre party.

The convention favored civil service for firemen.

Besides Chief Claibourne, the new officers are Joseph Shirk, Gary, First Vice-President; Marshall Ellett, Huntington, Second Vice-President; Archie McCabe, Muncie, Secretary; John Stahlhut, Fort Wayne, Treasurer. The next convention will be held in Terre Haute.

Iowa Firemen Re-elect Martin

J. W. Martin of Council Bluffs, Ia., was re-elected President of the Iowa Fire Fighters' Association for the sixth time. The other officers are Roy Vrba, Cedar Rapids, First Vice-President; Elmer Hubacher, Dubuque, Second Vice-President; William Hottel, Des Moines, Secretary-Treasurer; Trustees, H. C. Schrage, Waterloo, Dolph Becker, Oelwein and L. A. Moran, Sioux City. Fred Baer, President of the I. A. F. F. spoke at the convention. Cedar Rapids was selected as the next convention city.

Capt. Wm. Paul Babcock, Nyack, N. Y., is now on the sales staff of Walter Kidde & Co., fire protection equipment manufacturers. He will cover the Hudson River valley. He has severed a fifteen-year connection as an insurance inspector.

THE ROUND TABLE

For Practical Discussion of Current Fire Department and Fire Management Problems

TRAFFIC RULES GOVERNING FIRE APPARATUS

WHEN fire apparatus goes shrieking down the street, it is not to direct the attention of the passers-by to the men on the apparatus. It is to open a lane through the maze of traffic to facilitate quick response, for it is the first few minutes of a fire that count. Any arrangement that will speed apparatus on its way and yet will not violate the fundamental rules of safety, will increase the efficiency of the department.

In the box on this page is the problem in full that is discussed in this issue. It is a continuation of the discussion that appeared in the June issue. In the box on the following page is the problem that will be treated in the next issue. Should you have some comments that you would like to add to the discussion, you are invited to write to the "Round Table Editor," FIRE ENGINEERING, 24 W. 40th Street, New York, N. Y.

Discussion of the Question

Ward A. Wantz, Chief, Anderson, Ind.: It is almost impossible to obey traffic rules when responding to a fire and give the service that the public expects.

We are so located with our uptown companies in this city that we have to make about fifty per cent of our runs on a north bound street, and in order to make any time we go south against traffic and use the left hand side of this street with pretty good success.

Fire apparatus should only obey traffic lights when returning from fires. Every precaution should be used when running against a red light when responding to an alarm. I have been driving apparatus since 1906 and have made a pretty thorough study of traffic conditions as they are found by the driver of apparatus.

Victor H. Veit, Chief, Stamford, Conn.: When responding to an alarm of fire upon approaching a red stop-light, the driver must change to second gear, thereby slowing up and proceed with caution until light is passed, the same procedure must also be taken at blind corners to avoid accidents.

It is sometimes necessary for drivers to pass vehicles on the left side of the road. It is their duty to proceed to the scene of the fire no matter how they get through; sounding a warning at all times and using caution to avoid accidents.

Department apparatus should obey all traffic regulations when returning from a fire. They should stop at red stop-lights unless a police officer is there to clear the way for them.

Chis W. Noll, Chief, Poughkeepsie, N. Y.: Apparatus responding to a fire should get to the scene of the fire as soon as possible, using the utmost care for safety in doing so. Fire apparatus should at no time be compelled to obey traffic rules while so responding.

I also deem it wise to permit drivers to pass vehicles by driving on the left side of the road if they are sure they have a clear spot and there is no danger of collision. Quite often it is necessary to drive on the left side as all traffic lights flash red on an alarm of fire. This stops all traffic and consequently we have to drive on whichever side is clear, otherwise apparatus would be greatly delayed in reaching the fire.

I believe all apparatus should obey traffic stop-lights only when returning from an alarm of fire.

Louis Locher, Chief, Springfield, Ohio: In responding to a fire where a fire light is in operation, we disregard traffic rules.

Drivers are permitted to pass vehicles on the left side of the road only when vehicles are traveling in the same direction, but never to the left of street railway cars or large busses.

High courts have rendered decisions that the fire department has right of way under all traffic lights. We have regulations, however, that all drivers are responsible in the event of an accident when passing under a traffic light in the outskirts of the city not controlled by fire light switch. They must have fire apparatus under control so as to stop if necessary to avoid an accident when running under a red light. When returning to station from a fire, apparatus is subject to same traffic regulations as any other vehicle.

Chas. E. Schrom, Acting Chief, Washigton, D. C.: Section 23 of the Traffic and Motor Vehicle Regulations for the District of Columbia reads as follows: "None of the provisions of any section or paragraph of these regulations shall apply to apparatus and vehicles of the Fire Department when responding to alarms of fire or emergency calls or when operating on the fire ground."

Rules relative to responsibility of drivers and speed of apparatus in responding to and returning from alarms follow:

"The fact that the Traffic Regulations of the District of Columbia do not apply (with certain exceptions) to the apparatus and vehicles of the Fire Department when responding to alarms of fire or emergency calls, or when operating on the fire ground, shall not be construed as relieving officers and members from responsibility for accidents that may occur by reason of lack of care or the exercise of proper precaution.

"In responding to alarms no apparatus shall be driven at a rate of speed greater than that justified by the physical condition of the apparatus, or traffic conditions or the condition of the roadway. In no instance shall speed exceed 35 miles per hour between street intersections, 20 miles per hour at street intersections, or 15 miles per hour in making a turn, and such speeds shall be appropriately reduced when safety requires.

"Drivers of apparatus or vehicles of the department returning from transfers or alarms, or when engaged in routine business such as proceeding to or from the Repair Shop or other points, shall comply with the Traffic Regulations."

Carroll M. Nash, Chief, Dover, N. H.: The rules of the Dover Fire Department relative to traffic regulations are: "When responding to an alarm, drivers of apparatus upon approaching a traffic light shall slow down. If a traffic officer is at the light he will flash the green light thus giving driver the right of way; if

HERE IS THE PROBLEM

What is your opinion concerning rules to make fire apparatus responding to fires obey the traffic regulations.

Is it wise to permit drivers to pass vehicles on the left side of the road, if that is the only clear spot on the road?

To what extent should the apparatus of the department obey traffic stop lights?

no officer is at the light, drivers shall use all necessary precaution before proceeding by a red light.

"Driving to the left of the road to pass vehicles is not proper and safe unless the driver of the apparatus has an unobstructed view for at least 100 feet ahead."

We obey all traffic lights and stop signs when returning from an alarm, and it is my opinion that at such times the department has no more right than the ordinary vehicle.

T. D. Waldie, Chief, Point Pleasant, W. Va.: This is a very vital question in regards to traffic rules, especially in congested districts. But, in my opinion, regardless of traffic laws, the main idea is to get the apparatus to the fire as soon as possible as the first five minutes is the best time for arrival if you expect to make good headway in controlling same.

Usually there is enough warning of approaching vehicles to allow fire apparatus to pass vehicles on either side, or if in the city traffic rules usually compel other traffic to come to a stop. So the driver of fire aparatus has to be the judge of which side of the road to travel.

The driver of any apparatus should first know at what speed he can handle his machine to best advantage and then try to approach traffic lights with machine under control. If necessary he can make a quick turn to right or left to avert an accident. Just because a person is driving fire apparatus does not mean that he should be a speed demon.

Barney J. Houston, Chief, Cincinnati, Ohio: The Fire Department cannot be operated efficiently if apparatus is required to stop for traffic signal lights when responding to fires. No fireman driving to a fire wants to get into an accident, and everything is done to avoid traffic mishaps.

A trial run was made recently and all traffic regulations observed for the distance specified. Twelve minutes were required to cover the distance (including a traffic snarl). Normally the run can be made in one and a half minutes.

Traveling the wrong way on a one-way street when responding to alarms is another of our problems and my views on this point are that a policeman chasing a bandit wouldn't go around the block to avoid a one-way street, or halt at every red traffic light. The bandit doesn't recognize such things as time and route limitations. Neither do disastrous fires.

Samuel H. Jeffries, Chief, Wilkinsburg, Pa.: I don't think it would be proper to observe traffic rules when answering fire alarms. The few minutes lost in obeying such rules would be a great handicap to the department.

It is not wise to pass on the left side of traffic, and while our driver does this from time to time and gets away with it. I would not advise other fire departments to do so. Apparatus which costs from $12,000 to $18,000 must be taken care of at all times. Good judgment of apparatus drivers is essential if passing traffic on the left side of the road is practiced.

When fire apparatus is answering an alarm and comes to a traffic light which is red, the apparatus should be under perfect control and if possible should go through. When returning from fires, the stop lights should be obeyed as I think fire apparatus at such times is just another automobile in traffic.

W. J. Mohr, Chief, Santa Monica, Cal.: If fire apparatus must obey traffic rules through the city, the municipality might just as well inform its people that they had better organize their own fire department in each and every block of the city. I do say that exceptionally good judgment should be used when lights are against apparatus by having same under control, and always remember—safety first.

Apparatus can make better time in bucking traffic, besides it is safer if sirens are sounded and a speed according to circumstances is used. Why not the left side of the road as well as the right side? The thing to guard against is accidents.

Traffic stop lights should be obeyed only when returning from a fire. The utmost courtesies should be extended to other motorists in appreciation of their cooperation while apparatus was responding to the alarm.

Wilbur E. Seaman, Chief, Hempstead, N. Y.: The following rules from our General Order No. 2 apply to the questions which you have asked:

"No driver of any apparatus shall exceed a speed of thirty-five miles per hour at any time. He shall have his machine under control at all times and slow down for all street intersections, especially at traffic lights which show up red against him, unless there may be an officer to guide him through.

"In passing other apparatus on a main highway extreme care should be taken to see that the road is clear, and the rights of the other driver are not infringed on. Trucks having about the same rate of speed should not attempt to pass unless in an emergency. Remember that it is more important that the truck arrive at the scene of the fire a few minutes late than not at all."

Wm. F. O'Neill, Chief, Weehawken, N. J.: If automobile drivers obey traffic rules there need be no worry about fire apparatus which is responding to fires.

If vehicle drivers pull to the right side of the road and stop as they should, fire apparatus must pass on the left side.

Small departments should not be required to obey traffic stop lights. When responding to an alarm they must get to the fire as quickly as safe driving will permit. Returning from the fire, they are out of touch with headquarters and do not know whether or not another alarm is ringing. For this reason they should return to quarters as quickly as possible. They should at all times use their sirens or other warning signals so that other vehicles will be aware of the approach of fire apparatus.

Paul J. Suelflow, Chief, Hartford, Wis.: Fire department apparatus should not be made to obey all traffic rules when answering an alarm. This would result in serious delays to get to a fire which would sometimes have quite a start by the time the department got there. They should, however, drive cautiously on heavily traveled streets and if necessary reduce speed when traffic is against them.

I think it permissible to pass on the left side of the road if right of way is clear.

Apparatus should reduce speed and obey all traffic rules and stop signals when returning from a fire. Fire department trucks should be equipped with good signal apparatus.

Herbert R. Ferris, Chief, Greenfield, Mass.: If all traffic rules were obeyed by drivers of apparatus when going to a fire, I believe we would reach the scene of the fire too late. "Use care" is our motto.

If there is no other way to pass but the left hand side of the road and the vehicle you want to pass is not moving, pass with care. If traffic is moving, keep to the right.

I don't believe fire apparatus should come to a full stop, but should slow down to about 10 or 15 miles per hour, and drive cautiously past a traffic signal to the fire. In several departments with which I have been connected this plan has worked efficiently.

W. A. Westerfield, Chief, Albuquerque, N. M.: I do not believe fire apparatus responding to fires should obey traffic rules. As fast time as possible with safety should be made in answering alarms.

Drivers should always pass other vehicles on the left hand side of road, providing both are going in the same direction.

Fire apparatus should obey traffic stop lights in returning from fires and all other traffic rules of the city ordinance.

O. B. Kinsman, Chief, Watertown, S. Dak.: I believe that fire apparatus should have full right of way at all times. There is an ordinance in our city to that effect, and I find it works out to the best advantage. Drivers should take any source open to them when responding to alarms.

Fire apparatus should obey traffic stop lights only to the extent that same be under control in the event of an emergency.

HERE IS THE PROBLEM FOR THE NEXT ISSUE

On the average, how many chimney fires are you called on to fight each year?

Have you found that chimney fires have increased since the general use of domestic oil burning equipment? If so, how much?

What method do you use for extinguishing chimney fires?

James Warnock, Chief, Swampscott, Mass.: I do not believe apparatus responding to fire alarms should be required to obey traffic signals, because in some cities signals are very close together (in one city there are 5 in half a mile) and considerable delay is caused.

If no other way is open, I think it proper to permit drivers to pass other vehicles on the left side of the road provided of course, that they have an unobstructed view for the proper distance. Officer in charge should see that sirens and bells are used properly to keep road clear.

It is perfectly safe to pass signals if apparatus is kept within a reasonable speed limit and drivers are required to slow down until they are certain it is safe to pass the light. Sirens and bells should be sounded vigorously upon approaching such corners.

Dominick Esposito, Chief, E. Rutherford, N. J.: One must exercise caution at all times; second and most important, keep apparatus in 100 per cent mechanical condition with respect to brakes, etc.

Once a driver has demonstrated his ability as a chauffeur, he should use his own judgment in handling apparatus when going to fires.

The only precaution to be taken with regard to traffic lights is to continuously sound warnings and if possible arrange for police to cover important traffic intersections when an alarm is sounded.

J. R. Hare, Chief, Morgantown, W. Va.: In going to fires we try in every way to get there as quickly and safely as possible. We disregard all traffic rules at such times, being cautious in so doing, and we drive through red lights carefully.

We pass all traffic on either side of the road, wherever we can find room to get through.

When returning from fires we obey all traffic rules and stop-lights.

F. J. Stroh, Chief, Sturgeon Bay, Wis.: Apparatus should stop or reduce speed upon approaching a red light unless a traffic officer is stationed at that location.

If the road is clear, pass traffic on either side.

Traffic stop-lights should be obeyed only when returning from fires.

Peter Murphy, Chief, Hastings, Neb.: Apparatus responding to alarms should not be driven over thirty miles per hour in traffic.

If traffic were at a standstill and the driver is sure he can get in clear, driving on the left side of road to pass vehicles is satisfactory. But, it is never what you call wise to drive on the left side of the road.

Fire department apparatus should obey traffic lights when returning to the station from a fire.

Wm. H. Cook, Chief, Hartford City, Ind.: The speed used by apparatus when responding to alarms is governed by the amount of cross traffic. Stop-lights are disregarded, apparatus is kept under control when so doing.

My opinion is that it is not good policy to pass vehicles on the left side of the road.

We obey stop-lights to the extent of having apparatus under control, but do not stop for red lights if the cross street is clear of traffic.

C. B. Ahlgren, Chief, Albany, Cal.: My department members are instructed to pay no attention to traffic rules when going to fires, as a local ordinance gives fire apparatus the right of way when going to and from fires. The speed permitted is 30 miles per hour.

There are times when apparatus must drive on the left side of the road, and I believe it is the best way in avoiding delays.

Drivers are instructed to stop at all stop signs and signals only when returning from fires.

John C. Stahlhut, Chief, Ft. Wayne, Ind.: A city ordinance specifies that all emergency apparatus such as fire, police and ambulances, must make a momentary stop for red lights when on call.

Our local laws require that we must pass on the left side of any other vehicles.

When approaching stop-lights, all cars must be under control. Drivers are instructed that if the road is then clear to drop into second speed and pass the light. Upon returning to quarters all laws must be obeyed.

C. H. Russell, Chief, Kalamazoo, Mich.: It does not seem possible to draw up a set of rules that would govern the movements of apparatus when applied to cities of all sizes as the conditions and layout of some cities would differ and make certain rules unnecessary that would be satisfactory in other cities.

Traffic stop-lights should be obeyed when returning to quarters from a fire.

Roger Boyle, Chief, Jersey City, N. J.: In view of the fact that captains of fire companies are held responsible for the movement of fire apparatus, they should be permitted to use their own judgment in conformity with safety in response to alarms of fire. Passing vehicles on the left side of the road is permitted, using every precaution.

Officers in charge of fire apparatus should obey all traffic rules when and wherever possible.

John Marks, Chief, Valparaiso, Ind.: I do not favor rules to compel fire apparatus to obey traffic regulations when responding to fires.

It is not wise to permit drivers to pass vehicles by driving on the left side of the road if that is the only clear portion of the road. Apparatus should slow down at all stop-lights only when they are red.

Fred F. Knight, Chief, N. Tonawanda, N. Y.: Fire apparatus should obey traffic rules to a certain extent.

Drivers should keep apparatus to the center of the road as much as possible. I do not permit apparatus to be driven on left side of road.

Drivers of fire apparatus should keep same under control at all times, so that in case a traffic light turns red they can stop to avoid an accident.

L. R. Morris, Chief, Ames, Iowa: My drivers are instructed to approach stop signs with truck under control, but not to stop unless they have to do so to avoid an accident. Drivers pass vehicles on the left side of the road if it is clear.

Thos. H. Mahoney, Chief, Westfield, Mass.: I don't believe apparatus responding to fires should be obliged to obey traffic rules, but should drive cautiously.

In this state motor vehicles are supposed to pass on the left.

Traffic stop-lights are obeyed when returning to stations.

J. J. Kuplic, Chief, Manitowoc, Wis.: Department orders are such that if red light is against driver he should slow down and if necessary stop his machine.

A Wisconsin state law prohibits the passing of vehicles on the left side of the road.

If siren or bell does not get you the right of way with red light against apparatus, driver should stop. The same holds for arterial highways. Safety first always.

J. W. East, Chief, Hopkinsville, Ky.: Our truck drivers are instructed to have truck in second gear when passing stop-lights or stop streets so as to be able to stop truck if necessary.

Drivers may pass vehicles on the left side of road if necessary.

Apparatus obeys stop-light signals when returning to stations.

Earl L. Kahley, Chief, Freeport, Ill.: Drivers are instructed to use precaution in driving to fires if a light is against them, and to go through same carefully.

Apparatus drivers must pass other vehicles cautiously.

All traffic regulations and stop-lights should be obeyed by apparatus returning from fires.

W. F. Woods, Chief, Portsmouth, N. H.: Fire apparatus should not be required to obey traffic rules when responding to fire alarms. I believe it satisfactory to permit drivers to pass vehicles on the left side of the road.

Apparatus should obey traffic stop-lights only when returning from a fire. I am a great believer that speed in getting to a fire puts out more fires than water. Rules governing drivers depend on the drivers themselves.

Portland Convention Date Changed

The date of the annual convention of the Pacific Coast Association of Fire Chiefs has been changed to September 26-8. The meeting will be held in Portland, Ore. The outstanding feature will be a discussion of the Long Beach earthquake and the operation of the Major Disaster Plan.

Nassau Fire Council Considers Lights

The question of lights to designate the location of fire alarm boxes was discussed at a meeting of the Fire Chiefs Council of Nassau County at Hempstead, N. Y. The use of purple or blue lights was suggested, and a committee was appointed to study conditions. Dr. Theron W. Kilmer, New York Fire Department Surgeon, told of experiences with fire alarm lights. The next meeting will be held in September at Roosevelt.

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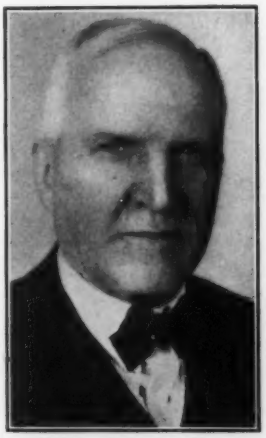

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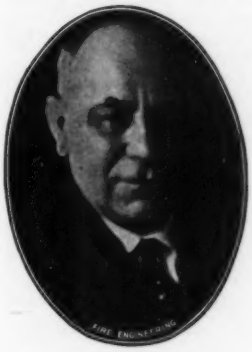

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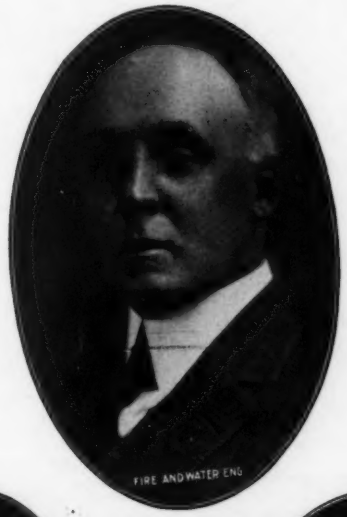

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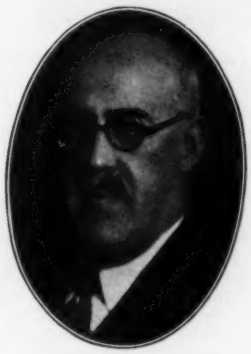

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FIRE DEPARTMENT EQUIPMENT MANUFACTURERS

Welch Chief of Columbus, Ohio

Edward P. Welch has been appointed Chief of the Columbus, Ohio, Fire Department, to fill the vacancy caused by the resignation of Chief Allen E. Nice who resigned on January 1.

Chief Edward P. Welch

Chief Welch was born in Columbus, April 29, 1891, and was educated in the local schools. He served an apprenticeship as machinist in the shops of the Chesapeake & Ohio Railroad.

He entered the Fire Department May 4, 1913, and served as fireman for 1½ years. Welch was then detailed to the mechanical department where he served for eight years.

When the World War broke, he joined the U. S. Army on September 5, 1917, and was assigned to a fire company at Camp Sherman, Ohio. He was later commissioned as Lieutenant and transferred to Fort Sill, Okla., as commanding officer of the fire company. Upon his discharge from the Army, he returned to the Columbus Fire Department, April 1, 1919. He was advanced to Lieutenant in 1923 and to Captain in 1926.

Chief Welch is married and has five children.

Florida School Held at Daytona Beach

Thirty-six Florida cities and Birmingham, Ala., were represented at the fourth annual Florida fire college held at Daytona Beach, July 10-12 with a registration of 106 students. The students received 5½ hours instructions a day in the following subjects which they could select:

"Salvage, Building Inspection and Ventilation," by Chief D. W. Brosnan, Albany, Ga.

"First Aid," by Ramone S. Eaton, field representative, American Red Cross.

"Drill Evolutions," by R. V. Johnston, Assistant Chief, Daytona Beach, Fla.

"Truck Maintenance and Operations," by Ray Larabee, West Palm Beach, Fla.

"Gas Masks, Respirators and Rescue Work," by Frank King, Mine Safety Appliance Company, Pittsburgh.

The evenings were devoted to round table discussions and electrical papers by G. S. Stuart, Engineer, Southeastern Underwriters Association, Atlanta, Ga. Demonstrations of electrical hazards and defective wiring were given by J. J. Lighthiser, Sebring, Fla., Fire Department. A short course in instructors training was given by C. O. Holley of the State Board of Vocational Education.

Chief Leedom Awarded Trophy

A group of professional and business men of Portsmouth, Ohio, organized as the Civic Forum, presented a trophy to Chief Robert Leedom, as the first of the local men to be honored for meritorious service. The committee praised his leadership in the 1933 flood, his constant civic interest and his organization of one of the best Fire Departments in the state. Chief Leedom declined all personal honor and said it was only made possible by the members of his department.

New York Signal Men Meet in Schenectady

Many interesting papers were presented at a meeting of the New York State Municipal Signal Association held at the Van Curler Hotel, Schenectady, N. Y. The New England Association and the New Jersey Association were represented.

Some of the papers read were, "Batteries, Their Care and Maintenance," by H. W. Beedle, Electric Storage Battery Company; "Sprinklarm," by W. J. Carroll, Rockwood Sprinkler Company, Worcester, Mass.; "Ground Construction and Testing," by W. H. Greenlaw, City Electrician, Beverly, Mass.; "Traffic Signals and Controls," by H. H. Bell, General Electric Company; "Joint Construction of Public Utilities and Fire Alarm Systems," by D. B. Taylor, New York Power & Light Corporation; "Growing Pains of a Power Line," by A. G. Strickrott, New York Power & Light Corp.; "Teletypewriter System of the State of New York," by Capt. A. B. Moore, New York State Police; "Radio and Its Connection with Police Prowl Cars," by R. L. Smith, General Electric Company; "Red Book Revisions," by E. P. Cochran, New Haven, Conn.

The new officers are: President, Everett Zeh, Schenectady; Vice-President, J. J. McCarthy, Rochester; Secretary, Adin Chase, Niagara Falls; Treasurer, Wallace Eggleston, Albion.

Fire Waste Council Enlarged

The Fire Service Extension Committee of the Chamber of Commerce of the United States has been enlarged to include representation from various sections of the country. The committee has the following members:

Clarence Goldsmith, Chairman—Assistant Chief Engineer, National Board of Fire Underwriters, Chicago.
O. D. Adams, State Director, State Board for Vocational Education, Salem, Ore.
Edward L. Boatright, Battalion Chief, Bureau of Fire, Portland, Ore.
Sherwood Brockwell, Deputy State Fire Marshal, Raleigh, N. C.
Frank Cushman, Chief, Industrial Educational Service, Federal Board for Vocational Education, Washington, D. C.
Walter Hough, Baltimore, Md.
Alfred H. Koltonski, chief of Fire Department, Rutland, Vt.
Frank McAuliffe, Chief, Chicago Fire Insurance Patrol, Chicago.
Lindon J. Murphy, Municipal Engineer, Iowa State College, Ames, Ia.
W. A. Newman, Assistant Secretary, Board of Fire Underwriters of the Pacific, San Francisco, Cal.
Prof. L. H. Provine, Director of Fire College, University of Illinois, Urbana, Ill.
George Richardson, Secretary, International Association of Fire Fighters, Washington, D. C.
Ralph Richman, Editor, *Fire Protection*, Cincinnati, Ohio.
Harry K. Rogers, Western Actuarial Bureau, Chicago.
Fred Shepperd, Managing Editor, FIRE ENGINEERING, New York City.
Edward H. Warr, Chief, Fire Insurance Salvage Corps, Baltimore, Md.
George S. Watson, Chief of Fire Department, Washington, D. C.
E. W. Williams, Assistant Chief of Fire Department, Lynn, Mass.

Pennsylvania Holds First Short Course

The first annual fire service extension school under the auspices of the Southwestern Pennsylvania Fire Chiefs' Association, was held July 28-9 at the California State Teachers College, California, Pa., with a registration of 152. The program consisted of the following talks:

"Fire Department Organization," by Harry K. Rogers, Western Actuarial Bureau.
"Ventilation," by William S. Rathbun, Engineer, National Board of Fire Underwriters.
"Developments in Dust Explosion Prevention of Spontaneous Combustion," by Dr. David J. Price, U. S. Department of Agriculture.
"Rope Evolutions," by Capt. Bartholomew, Wheeling, W. Va.
"Fire Department Inspector," by Chief J. W. Just, Western Actuarial Bureau.
"Hydraulics of Fire Streams," by William S. Rathbun.

Maritime Chiefs Meet in Digby

A large number of chiefs attended the nineteenth annual convention of the Maritime Fire Chiefs' Association at Digby, N. S., Canada, July 18 and 19. The business sessions opened with Thomas A. Armour, Vice-President, presiding.

Maj. J. A. Rudland, Chief Fire Marshal of Nova Scotia, read a paper in which he gave a survey of fire losses in the province and measures adopted to combat fire. E. B. Tanner of the American-LaFrance Fire Engine Company spoke on modern fire fighting equipment. Assistant Chief C. S. Cann of Yarmouth described methods of keeping fire records.

The new officers are President, Thomas A. Armour, Capt., Salvage Corps, St. John, N. B.; First Vice-President, Vincent Hall, Chief, Sydney Mines, Nova Scotia; Second Vice-President, Karl A. Walker, Chief, Fredericton, N. B.; Third Vice-President, W. J. Christie, Chief, Truro, N. S.; Secretary-Treasurer, K. J. MacRae, Capt., Salvage Corps, St. John, N. B.

The next convention will be held in Truro, July 17 and 18, 1934.

West Virginia Chiefs Hold Short Course

Nearly the entire state of West Virginia and sections of western Pennsylvania were represented at the third annual fire service extension school held at the University of West Virginia, Morgantown, July 24-7.

Fred B. Watkins, Fire Marshal, spoke on "Suppression of Arson." Chief "Smoky Joe" Rogers gave a talk on "Selling the Fire Department to the Public." Chief Edward Green, of Steubenville, Ohio, told of the fire school work in Ohio.

In the afternoon, the men were trained in drills and evolutions at the drill tower. The men were divided into groups according to the number of fire schools they had attended.

The second day of the school, C. B. Chemist, American-LaFrance and Foamite Industries, Elmira, N. Y., spoke on "Modern Methods of Fighting Fires With Chemicals." George Riggs, Mine Safety Appliance Company, Pittsburgh, Pa., explained, "The Use of Gas Masks in Smoke Fires." Dr. David J. Price, U. S. Department of Agriculture, spoke on dust explosions and exhibited two reels of motion pictures.

At the third day of the school, Chief J. W. Just, Western Actuarial Bureau, Chicago, spoke on "Salvage." Chief E. A. McGranahan, Wheeling, was in charge of a round table discussion on "Ventilation." William S. Rathbun, Engineer, National Board of Fire Underwriters, gave a demonstration of fire hazards.

Eighty-eight of the 203 firemen who had registered for the course were presented certificates for attendance and proficiency, at the final session which ended with a competitive drill.

Washington Firemen Hold Convention

A program of education for firemen was advocated by W. A. Groce, former State Fire Marshal, at the eleventh annual convention and third annual fire school of the Washington State Firemen's Association held at Bellingham, Wash., July 13-15.

Verne Henry presented a paper on "Are Fire Drills an Important Part of Our School System." H. S. Jenkins, City Electrician, Bellingham, spoke on "Electrical Hazards as Pertaining to Both Life and Property."

The first evening of the convention was devoted to a public first aid contest and to a meeting of the secret order of the "Snapping Turtles."

A motion was adopted condemning the use of sirens as part of a radio program. With the use of outdoor radio sets, the amplification of sirens as used in the program causes traffic confusion.

At the election of officers, Chief Lyle J. Ficklin was made President. He has been chief of the Kalama Volunteer Fire Department for the past nine years and served as Vice-President of the state association for a year. L. L. Burgeinder, of Colfax, was elected First Vice-President; Ray Gilbert of Everett, Second Vice-President; H. A. Jenkins of Bellingham, Secretary; C. H. Tracy of Arlington, Treasurer; Trustees, W. A. Gross, of Olympia, chairman; W. E. Ropes, of Sedro Wooley; E. J. Treese, of Raymond; C. Laws, of Vancouver.

Cleveland May Spend $2,500,000

Cleveland, Ohio, is prepared to spend $2,500,000 for improvements in the fire and police departments, if the federal government can be persuaded to help finance the project in accordance with terms of the National Industrial Recovery Act.

William S. Lougee, City Architect, has drawn papers on the extensive improvement program which is the result of a survey by Safety Director E. E. Adams. The city plans to spend $1,250,000 for buildings and equipment for the Fire Department and a like sum for the police branch. It will be the first serious effort the city has made to abolish useless stations and to relocate others. Should the project go through, Chief James E. Granger will be provided with equipment which he considers absolutely necessary.

The plans called for the construction of a fully equipped drill tower at some central location; the purchase of seven 85-foot aerial ladders; ten 1,000-gallon pumpers; a water tower to replace one that has been in service for thirty-seven years; two high-pressure wagons to replace two old ones; two rescue squad cars; two 250-gallon tank cars for carrying gasoline to apparatus working at fires. The fire alarm system is to be revamped at a cost of $107,500 and $600,000 is asked for two fire boats. The latter two expenditures are not included in the $1,250,000 improvement project.

Washington Fire Chiefs Meet

The second annual convention of the Washington State Association of Fire Chiefs was held at Bellingham, Wash., on July 12, just preceding the meeting of the State Firemen's Association. All the officers were reelected, as follows: President, Chief Charles E. Everett; Vice-President, Chief Ray Hare, Yakima; Second Vice-President, Chief E. J. Treese, Raymond; Secretary, Captain W. A. Groce, Olympia; Treasurer, Chief Charles H. Tracy, Arlington; Board of Control, Battalion Chief O. H. Ebbinghouse, Seattle; Chief Rex Putnam, Wapato; Chief Bert Sybrant, Bellingham, and Chief E. J. Grandchamp, Onalaska.

It was decided to hold the 1934 convention at Chehalis, on invitation of Chief E. C. Kuehner, of that city.

Oregon Starts Fire Prevention Records

A. H. Averill, Oregon State Fire Marshal, announces the pioneering by his office of a new step in the advancement of fire prevention work through the installation of fire prevention bureaus in cities and the larger towns of the state having paid and regularly organized fire departments. The need for a uniform system of record keeping was realized when a survey revealed that some of the various systems in use were inadequate and incomplete and that many times when information was needed it was necessary to go to the files of local newspapers.

Under the auspices of the State Fire Marshal's office, and working in conjunction with the Fire Chiefs of the cities of the above classification, a uniform system is being rapidly adopted in the form of an accumulative card file which records all inspections and investigations with the result that those occupancies which have been checked, and the recommendations not complied with, are readily available for rechecking upon referring to the new records. The system includes a complete report of all fires together with details as to how they were extinguished and the kind of equipment used. Included also is an individual fire history of all persons suffering a loss by fire and a similar record of every building.

The work is rapidly progressing and this year will see its successful operation throughout the state.

Apparatus Crash Kills Officer

Capt. Austin E. Dungan, Engine Company No. 5, Hartford, Conn., Fire Department was instantly killed and two members of the same engine company were seriously injured as the result of a collision between fire apparatus and a heavy ice truck. The accident occurred at Sigourney and Collins Streets, when the department apparatus was responding to an alarm of fire. The driver may lose the sight of his right eye, while a member of the same company received cuts and bruises about the body.

According to a police investigation, the driver of the ice truck failed to allow the apparatus to pass at a stop sign. Both machines collided with a terrific impact. Capt. Dungan was pinned beneath his apparatus when the machine turned over. The ice truck struck a fire alarm box and continued onto the lawn of the Hart School of Music.

The damage to the fire alarm box temporarily put out of commission twenty alarm boxes in the district which were attached to that circuit.

THOMAS F. MAGNER.

A 350-gallon Ward LaFrance pumper for rural use has been placed in service by the Franklin Fire Company of Chambersburg, Pa.

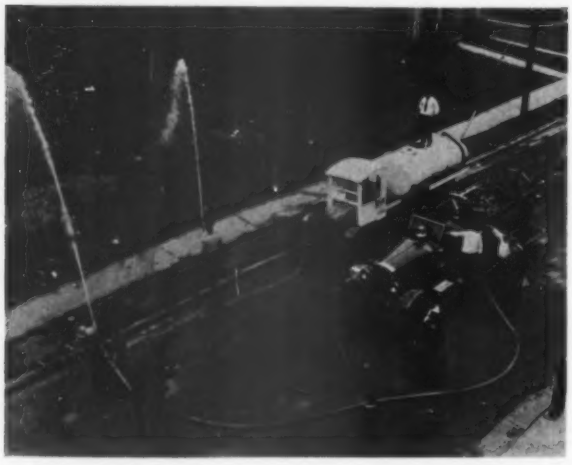
While on his way to attend the graduation exercises of his son, Chief Anthony Pippel of Grand Haven, Mich., fell dead at Kalamazoo. He was head of the department for twenty years.

Eight weeks' back salary due to the members of the Bridgeport, Conn., Fire Department was paid in full by the city officials on July 14. City comptroller John J. O'Rourke sent a letter of appreciation to the Fire Department for their patience in waiting for the money due them.

Chief Henry Lecocq, of Marshfield, Ore., in his annual report recommends that the city employ a fire inspector to make at least a yearly examination of the residential area, and a monthly inspection of the business section. He said that the reduction in insurance rates already gained would pay for the inspector's salary.

Devices for Bettering the Fire Service

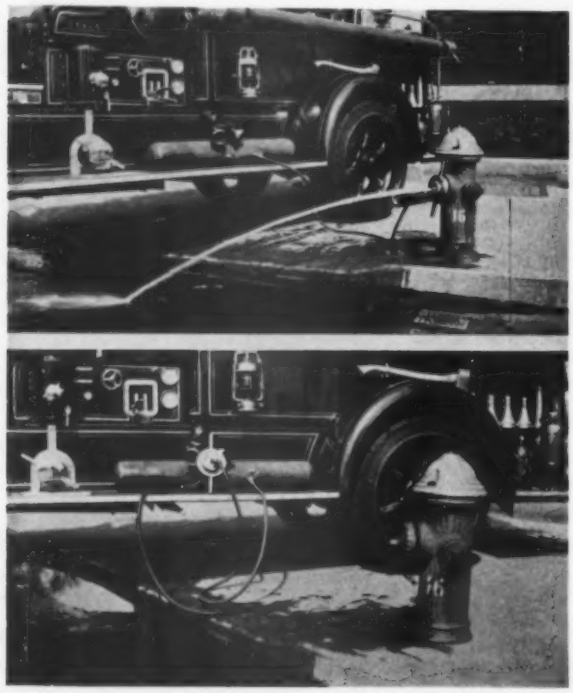
Staten Island, a division of New York City, is a metropolitan area with some rural problems. From March 15 to May 15 the fire companies on the island are called to extinguish many brush fires. There are large open spaces in the Borough of Richmond covered with tall grass and brush, and during the brush fire season, there may be as many as fifty alarms in one day. In the outlying sections, hydrants are few and far apart. Long stretches of hose are necessary



Testing the Combination of Sprinkling Truck and Fire Department Pumper at Staten Island

to reach the fire. Many sections of hose must be taken from the apparatus, and after it has been used, uncoupled and dried.

Deputy Chief John Spencer requested the use of sprinkling trucks used by the Department of Sanitation. Two such trucks were loaned to Staten Island. The spray nozzle was removed at the 2½-inch valve, and a 2½ x 1½-inch male reducer connected for the Fire Department's 1½-inch hose.



Two Views Showing the Assembly of the Device for Pumping Out Hydrants, and One in Use at a Hydrant

These flushing trucks are used in connection with the department pumpers. The pumper draws water from the sprinkling carts and the water pumped through small size hose. Long hose stretches are avoided and water is brought to places without hydrant service.

A device for pumping out hydrants in cold weather was developed by Firemen Frederick A. Balzer and Conrad C. Schwall, of the New York Fire Department.

A compressed air tank six inches in diameter and forty inches long is tapped for a ¼-inch hose connection. The tank is carried on the running board of the apparatus. When it is necessary to pump out a hydrant, a 4½-inch cap with a ½-inch tap is placed on the 4½-inch hydrant outlet, with six feet of ¾-inch hose connected to the ½-inch nipple, and extended down through the barrel of the hydrant to the valve seat. A ¼-inch air hose is connected to the valve at the side of the tank and to the valve on the 4½-inch cap. The air valve on the tank is opened and air is forced to the top of water in the hydrant barrel. The pressure forces the water from the bottom of the hydrant through the six feet of ¾-inch hose.

These two firemen have developed other devices for the betterment of the fire service.

WHAT'S BURNING

THE following list includes fires of $50,000 loss and over in the United States and Canada, for the month of July, 1933. These figures, compiled from the telegraphic reports are based on estimates made at the time, and are subject to later investigation and consequent revision. Taken as a whole, however, they are an approximately correct view of the losses incurred. The figures represent loss in thousands of dollars.

Month Ending July 31	Loss in Thousands of dollars
Frankfort, Ky.—State Arsenal building damaged	160
Holyoke, Mass.—Plant of United Paper Co. destroyed	65
San Francisco, Cal.—Lumber stock in yards of Kirschmann Lumber Co.	200
Brooklyn, N. Y.—Property of Michel Brewing Corp. damaged	80
Aurora, Ill.—Consumers Ice Plant destroyed	80
San Jose, Cal.—Property of several canneries destroyed	50
La Prairie, Que.—Plant of St. Lawrence Brick Co. damaged	100
Unionville, Mont.—Mill and mine bldgs. at Spring Hill Mine	80
Stockton, Cal.—Fruit warehouse destroyed	80
Williamsburg, Ky.—Department store, adj. business property	80
Springfield, Ill.—State House damaged	65
Parkin, Ark.—Yards of Northern Ohio Lumber Co. destroyed	80
Stockton, Cal.—Whse. of E. H. Tryon woolen mills damaged	75
Essex Falls, N. J.—Kingsley School destroyed	65
Lindsay, Cal.—Packing plant of T. E. Anderson destroyed	50
St. Louis, Mo.—Plant and warehouse of Electrol, Inc.	65
Camden, N. J.—Lumber yard of C. B. Coles & Son, Inc., adj. property	200
Roanoke, Va.—Bldg. occupied by Schulte United Dept. store	80
Causapascal, Que.—Offices of International Paper Co., adj. property	200
Sikeston, Mo.—Scott County Milling Co. grain elevator	65
Stuart, Fla.—Whse. and depot of Florida East Coast R. R.	50
Charleston, W. Va.—Plant of Elk Milling and Produce Co.	80
Simcoe, Ont.—Warehouse of J. B. Jackson damaged	90
Union City, Pa.—West wing of Shreve Chair Co. bldg. destroyed	125
Ottawa, Ill.—Dredge of H. & O. Dredging Co. destroyed	50
Alturas, Cal.—Box factory and plant of Crane Creek Lumber Co. at Willow Ranch	60
Chicago, Ill.—Whse. of Chicago Tribune damaged	250
Chicago, Ill.—Whse. of Anglo-Amer. Prov. Co. & adj. property	125
Sydney, N. S., Can.—R. J. Logue & Co., whse. and shop	125
Reading, Pa.—Plt. of B. & J. Saylor & adj. prop. damaged	60
Clinton Corners, N. Y.—Bldgs. on Brenner Farms	100
Moncton, B. C., Can.—Bldgs. of Record Stove & Furnace Co.	65
Turlock, Calif.—Osborne & Son, stor. bldg. damaged	85
Willows, Calif.—Whse. of F. Juney at Riz destroyed	75
East Dallas, Tex.—2 lumber yds., ice house and dwellings	340
Fresno, Calif.—Wellman Peck & Co. whse. destroyed	170
Louisville, Ky.—Plt. of Kentucky Lumber & Millwork Co.	70
Cumberland, B. C., Can.—Large part of the business dist. destroyed	110
Tessville, Ill.—Property of Becker Box Mfg. Co.	200
Quebec, Que.—American Stores bldg., and Imperial Theatre	80
Nakusp, B. C.—Yard of White Pine Lumber Co.	65

Ex-Chief James Russell, Jr., of Fond du Lac, Wis., forty-three years old, died from complications of injuries received while in the fire service. He had retired on January 1, after serving nearly twenty-two years, the last eight as Chief.

Deputy Chief Michael McPhee of the Lawrence, Mass., Fire Department died at his home recently. A large number of New England Chiefs attended the funeral including Chief David H. DeCourcey, Winchester, President of the Massachusetts Fire Chiefs' Club; Chief John W. O'Hearn, Watertown, Secretary-Treasurer, New England Fire Chiefs' Association; Chief Seldon Allen, Brookline, Vice-President, International Association of Fire Chiefs.

Model 3126530—Charges one battery at a time. Six amp. output.

TUNGAR KEEPS FIRE TRUCK BATTERIES IN TOP FORM

Short, infrequent runs . . . heavy drains due to sirens, floodlights and other electrical equipment necessitate frequent recharging of fire truck batteries. That is why we recommend a G-E Tungar Battery Charger for every fire station. G-E Tungar is easy to use. Any station employee can connect it without removing the battery . . . and the Tungar charger does the rest.

Economical to own and operate, a Tungar Battery Charger will keep batteries in "top form" at all times. Thus, the electrical equipment of your trucks will respond promptly without a possibility of battery trouble.

Fire stations in many municipalities have overcome battery charging problems with a G-E Tungar. (40 are used in Cincinnati alone.) Write today for complete details.

Section A-568, Merchandise Dept.,
General Electric Co., Bridgeport, Conn.

Please send more information about G-E Tungar Battery Chargers.

Name.....

Address.....

City.....

AUTOMOTIVE PRODUCTS

Model 6RC54D2—Vertical mounting. Rated 150 mils, 12 to 24 cells.

GREATER FIRE ALARM EFFICIENCY AT LOWER COST

General Electric Copper Oxide Rectifiers cut battery requirements in half. One set of batteries is all that is necessary. General Electric Rectifiers maintain batteries in a fully charged condition . . . full battery capacity always available . . . your reserve protection against A-C. line failure.

A separate G-E Rectifier for each battery assures dependability with maximum efficiency. They are easy and economical to install. Simple, convenient micrometer control of output facilitates accurate adjustment of charging rate.

G-E Copper Oxide Rectifiers prolong battery life and permit worthwhile economies which your community will appreciate.

For complete details or consultation with our specialists, mail the coupon today.

Section A-568, Merchandise Dept.,
General Electric Co., Bridgeport, Conn.

Please send more information. We want to talk to one of your specialists.

Name.....

Address.....

City.....

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GENERAL ELECTRIC

MERCHANDISE DEPARTMENT, GENERAL ELECTRIC COMPANY, BRIDGEPORT, CONNECTICUT

NRA MEMBER U.S.
WE DO OUR PART

NEW SUPER-HIGHSPEED FIRE DEPARTMENT SIREN

"It Coasts and It Rolls"

New COMPACT, with NEW DEPARTURE ball bearings! Touch the button for only 3 seconds and it roars and coasts along for half a mile or more. The WAVING shriek is very effective.

$29.90

Drain on battery less! It's powerful! A Super-Siren with 5½" rotor. No Siren can surpass this to open up a lane through traffic for fire apparatus.

It is beyond challenge the fastest, quickest and most compact siren for power and weight. The finest of them all, retaining all the characteristics of W. S. Darley & Co. Sirens, which have served the fire departments for so many years.

$65.00 OF VALUE!

In our opinion it is, and we back our words by offering to let any Fire Chief use the Siren for 30 days, and he can be the judge whether he keeps it or not.

CHROMIUM PLATED
Entire length 11½". For 6 or 12 volts. Complete with bracket, switch and wire.

No. FEC860 Fire Dept. Super Coasting Siren **$29.90**

We Signed the President's Agreement
Aug. 2nd

Special Fire Dept. DROP FORGED Adjustable HYDRANT WRENCH and HOSE SPANNER **$1.90**

Unbreakable

For many years we made our Adjustable Fire Dept. Wrenches of malleable steel. But, with the insistent demand for a stronger, tougher wrench, we are now Drop-Forging our wrench of a high grade CARBON STEEL.

The steel we use was selected after exhaustive tests as providing the strongest, toughest and most desirable.

Our Drop-Forged Adjustable Fire Dept Wrench is **absolutely breakproof**—no matter how hard the work.

Opening in head may be regulated to fit any size pentagon nut up to 1⅝" across face of same by turning the handle to right or left for size desired.

A fireman needs a tool that's a help—He wants a wrench on which he can pull his last ounce, if necessary, and know the tool will take all he can give.

No. FEC285. Drop Forged Adjustable Fire Dept. Wrench and Spanner, Each **$1.90**

"If Anything Is Not Right
We Would Rather Have It Sent Back Than Your Money"

W. S. DARLEY & CO. 2810 Washington Blvd. CHICAGO

NET PRICES
Less 3% Discount for Cash or C. O. D. Order

Equip *once for always!*

CHICAGO FIRE STATION
These doors automatically close after apparatus has left the building.

SPECIALISTS in HEAVY HARDWARE and AUTOMATIC EQUIPMENT for FIRE STATION DOORS

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AUTOMATIC DOOR and EQUIPMENT CO.
2301 North Knox Avenue
CHICAGO

Dressy Uniform Shirts

Made of medium blue TubTest (fast-color) chambray or dark blue TubTest percale; with collar attached or with two detachable laundered collars to match. This SIGNAL, now specified by Fire Chiefs all over the country, is favored because it is both dressy and practical.

John Rissman & Son
SIGNAL SHIRT DIVISION
CHICAGO

QUALITY FIRST — Signal — UNION MADE

West Virginia Chiefs Meet in Morgantown

The second annual meeting of the West Virginia Fire Chiefs' Association was held in Morgantown, July 25, during the fire service extension school. The Chiefs decided that regional instruction meetings for firemen will become a part of the extension school next year. These gatherings will be held in several cities several months before the fourth annual schooi is held at the University.

The new officers are Martin Quinn, Martinsburg, President; John R. Hare, Morgantown, Vice-President; C. J. Powell, Romney, Secretary; E. A. McGranahan, Wheeling, Treasurer. S. E. Huffman of Clarksburg and J. L. McLane of Charleston were renamed to the Executive Board.

News of Box 13 Associates

Leon Wolfe has been elected Chief of the Box 13 Associates in Cincinnati, Ohio, and Robert R. Ballantyne, 1504 Union Trust Building, Cincinnati, was elected Secretary-Treasurer. This association meets the second Tuesday of each month and welcomes visitors from similar organizations of other cities who may be in Cincinnati.

At the last meeting Chief Barney Houston, of Cincinnati Fire Department, and Edward Ader, Superintendent of the Cincinnati Underwriters' Salvage Corp., were elected Honorary Members.

English Lectures on Fire Topics

The Royal Society of Arts, London, England, has just published the Fothergill Lectures delivered before the society in November and December of last year. It includes lectures on "Fire Fighting," by Commander A. N. G. Firebrace, Divisional Officer, London Fire Brigade; "Safety of Life from Fire," by Lieut.-Col. Guy Symonds, Fire Advisor to the Home Office; "Design and Construction of Buildings in Relation to Fire Risks," by Maurice E. Webb, President, Advisory Council of the Building Industry.

A copy can be obtained for 2/6d., by writing to the Secretary, Royal Society of Arts, John Street, Adelphi, W. C. 2, London, England.

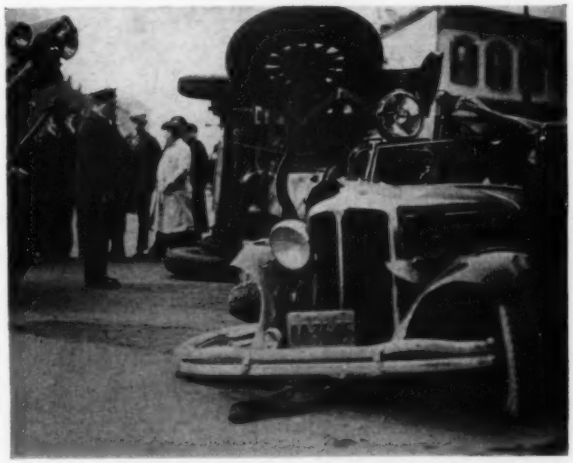
Apparatus Must Obey Traffic Rules

A Superior Court Judge of California decided that fire apparatus must obey the laws required of other vehicles.

In 1930 there was a four-alarm hotel fire in Oakland, Cal., during the afternoon, in the heart of the city. A spark from the hotel fire started a shingle roof blaze a few blocks away. While responding to this fire it was necessary to travel through a main street approaching the original fire. This highway was heavily congested on the right side but had a clear side on the left—the wrong side for traffic. While the apparatus was moving through on the left side, a woman darted across the path of the apparatus. In trying to avoid striking the woman, the apparatus was struck on the left side by another automobile which swerved the apparatus so that the fire apparatus' right fender struck her and knocked her down. She died on the way to the hospital.

The court awarded the husband of this woman $5,000 damages. The evidence showed that the apparatus on the way to the fire had passed a street car on the wrong side of the street and had ignored a traffic light while traveling at a speed of thirty-five miles an hour. The suit against the city, Battalion Chief Kispert and his driver was for $50,000. In awarding the $5,000 damages, the Judge stated:

"There is no exception under the law permitting the police or fire automobiles to violate the traffic laws."



Proof That Two Bodies Cannot Occupy the Same Space at the Same Time

Despite the fact that four companies were responding to a fire in Schenectady, N. Y., with all the sirens operating, a motorist ignored them all and tried to cut over directly in front of an approaching pumper. The photograph shows the result. The pumper crew escaped with a severe shaking up. The pumper was thrown over on its side, and one side of the car was completely wrecked.

N. Y. Apparatus Slows Speed of Runs

Instructions have been given to company commanders of the New York Fire Department by Chief John J. McElligott that may tend to slow up response of apparatus answering fire alarms. In his special order Chief McElligott stated:

"In proceeding at a necessary slower pace, the Department is but accepting the lesser of all evils, on the theory that it is better to get to the fire just a little tardy—but eventually to get there—than to endeavor to outguess motorists who, today, have absolutely no regard for Fire Department apparatus, nor for the purpose for which it appears on the streets, and, perhaps not get to the scene of the fire at all."

Arson Plot Found in Chicago

An arson racket, in which the same load of partly burned furniture and clothing was planted in numerous homes to bolster up claims for insurance on fake fires, has been broken up in Chicago with the indictment of forty persons, the result of an investigation by the Chicago office of the State Fire Marshal. The ring leader is said to have been an insurance broker who made arrangements for fires with various individuals after placing insurance on household goods. Enough of a fire would be set to char floor and baseboard. The Fire Department would not be called but a claim for insurance would be filed the next day.

The large number of these claims aroused suspicion of the insurance companies. Deputy Fire Marshals got so hot on the trail of the ring leaders that they were able finally to catch them in the act. Others who have had small losses of this character are being checked up and more indictments may follow.

Newly Elected Chiefs

The following have been elected to head the Fire Departments in their respective municipalities:

Park Ridge, Ill.—Joseph E. Rosentreter
Alta, Ia.—C. E. Wilcox
St. Louis, Mich.—Archie Palmer
Scottville, Mich.—Fred J. Reader, Jr.
Lake Preson, S. D.—Joseph Funk
Lanark, Ill.—Z. Brenaman
Hubbell, Mich.—Leo C. Frenette
Fremont, Wis.—Frank Koch
Bangor, Mich.—George M. Low
Ossining, N. Y.—Duane S. Byble
Heron Lake, Minn.—F. W. Freer
Baldwin, N. Y.—Sylvester Sorrentino
Croton, N. Y.—Merritt A. Dayton
Phillips, Wis.—Carl A. Raymond
Barnsboro, N. J.—John L. Orens
Seabright, N. J.—Frank Covert, Jr.
Ft. Edward, N. Y.—Thomas Colvin
Hudson Falls, N. Y.—John G. Hagen
Mt. Kisco, N. Y.—Rockwell Mathews
Wildwood, N. J.—William Letts
Northwood, N. H.—Roger D. Hutchins
Leonia, N. J.—Sidney Davis
Ironton, Minn.—M. M. Dupey
Dinuba, Cal.—Verne Stockholm
Margaretville, N. Y.—Cecil Polley
Tallman, N. Y.—Lawrence W. Chamberlain

Two Cities Must Pay Accident Verdicts

The Supreme Court, in an action brought by the widow of a New York fireman against the city of New York, awarded a verdict of $20,000. The fireman was killed May 30, 1930, when he was thrown from a ladder truck. The widow, as executrix of her husband's estate, sued the city and the contractors who were doing work near the scene of the accident. The jury only returned a verdict against the city.

In a White Plains, N. Y., court, a tailor's assistant of Mt. Vernon, N. Y., was awarded a verdict of $18,500 for injuries received when the automobile of the Fire Chief struck him. The Chief was not in the car at the time. The verdict was returned against the city of Mt. Vernon.

TENTATIVE TECHNICAL PROGRAM OF THE I. A. F. C. 1933 CONVENTION

Important Subjects in Fire Fighting That will be Considered at the 61st Annual Gathering and the Authors

FOLLOWING is the tentative technical program of the sixty-first annual convention of the International Association of Fire Chiefs, which is to take place on the Steamer Seeandbee, from August 21 to 27. This will be subject to subsequent correction.

"Fire Department Administration at Dallas, Tex," by Chief Rod D. Gambrell, Dallas, Tex.

"What California Learned in Standardization of Hose Threads and Couplings," by Jay W. Stevens, San Francisco, Cal.

"Are We Fire Alarm Conscious?" by Sherwood Brockwell, Raleigh, N. C.

"Fire Department Problems of the Automotive Industry," by Chief W. J. Israel, Detroit, Mich.

"The Fire Department Pension System of Milwaukee," by Chief Peter Steinkellner, Milwaukee, Wis.

"Forcible Entry Equipment," by Chief Charles J. Brennan, San Francisco, Cal.

"The District Emergency Plan," by Ex-Chief James J. Mulcahey, Yonkers, N. Y.

"Are Fire Departments Getting the Short End of the New Deal?" by Chief John J. Towey, Newark, N. J.

"What Can be Done to Make the Public as Well as the Fire Officials Fire Protection Conscious," by Chief Wm. Castimore, Buffalo, N. Y.

"Auxiliary Sprinkler Systems," by Chief Selden R. Allen, Brookline, Mass.

"Servicing Fire Apparatus and Equipment," by Ed. Rumsey, Master Mechanic, Detroit, Mich., Fire Department.

I. G. Hoagland, Sprinkler Expert, Dead

Ira G. Hoagland, fifty-six years old, and Secretary-Treasurer of the National Automatic Sprinkler Association since it was founded in 1914, died at his home in Brooklyn, N. Y. He was born in Brooklyn, June 14, 1877 and entered the insurance field in 1896 as clerk. From 1912-14 he was editor of "Insurance Engineering and Safety Engineering." Since that time he devoted his full time to the protective angle of fire insurance.

Mr. Hoagland was a member of the American Water Works Association, American Society of Mechanical Engineers, the National Safety Council, National Fire Protection Association, International Association of Fire Chiefs, and the Holland Society.

He is survived by his widow, a son and a daughter.

Great Lakes Chiefs to Meet on Boat

The date of the annual convention of the Great Lake Association of Fire Chiefs has been changed to August 21-26 so that the members may join with the International Association of Fire Chiefs on board the Steamer Seeandbee. The meeting will be arranged so it will not conflict with the I. A. F. C. sessions. The boat will stop at Detroit to allow the Michigan members to board at that point. Chief Peter Steinkellner, of Milwaukee, Wis., is President and R. E. Mottesheard, Dearborn, Mich., is Secretary of the Great Lakes group.

Quebec Chiefs Meet in Montreal

Fire and Police Chiefs of the Province of Quebec, Canada, gathered in Montreal, July 11 and 12 for their first annual convention.

Deputy-Director C. Barnes, of Montreal, spoke on the discipline in Fire and Police Departments, and in the training of recruits. James McIsaacs, Fire Prevention Inspector for Montreal read a paper on fire prevention work. Henry Rethoret, Superintendent, Canadian Fire Underwriters Investigation Bureau spoke on arson. Others participated in the program.

Over two hundred persons attended the annual dinner which was held in the Windsor Hotel.

Among the gifts presented was a chest of silverware to Chief Robert Harrington, Secretary of the association, for his work during the past year.

The officers are President, L. B. Temple, Chief Fire Patrol, M. L. H. & Power Cons., Montreal; First Vice-President, Fernand Dufresne, Director, Montreal Police Department; Second Vice-President, George A. Shea, Director, Canadian National Railways Police and Investigation; Third Vice-President, Jules E. Vachon, Chief, Three Rivers; Secretary-Treasurer, Robert Harrington, Chief, McColl Frontenac Oil Refineries Ltd., Montreal.

The 1934 convention will be held in Three Rivers as part of the 300th anniversary of the city's founding.

Chief Hansen of Duluth Dead

Sievert H. Hansen, a fire-fighter for thirty-five years and Chief of the Duluth, Minn., Fire Department since 1927, died in a local hospital following kidney trouble. He was the sixth Chief since the department was organized in 1887.

He migrated to Duluth from Norway in 1890 and joined the Fire Department on August 12, 1898. On February 1, 1904, he became Lieutenant of a chemical company; Captain of an engine company on July 1, 1906; Second Assistant Chief, December 1, 1915; First Assistant Chief, June 6, 1920; Acting Chief in 1926 and Chief in 1927.

He was a member of the Sons of Norway, Masons and the Shriners.

He is survived by his widow, five sons and five daughters all of Duluth, three brothers and two sisters.

John A. Fisher has been appointed the new Chief of the Fire Department. He announced that no change will be made in personnel.

Illinois Course Held at University

The ninth annual fire college, conducted by the Illinois Firemen's Association, was held at the University of Illinois, Champaign-Urbana, June 20-23. The budget for the school was about half of that of last year. The 341 persons who attended were enthusiastic about the work. The program was simplified to avoid the crowding of former years.

On the second day, three specialized schools were held—a school for engineers, one for inspectors, and the third a firemen's school. This part of the program was a great success.

If funds are available next year, the association is ready to continue the good work that has been started.

Montana Firemen Gather in Havre

The forty-second annual convention of the Montana State Firemen's Association was held in Havre, Mont., July 20-22. Talks were given on the following subjects:

"Troubles of the Legislative Committee," by A. L. Quinn, Missoula.

"How to Recognize Evidence of Incendiary Fires," by J. W. Mountjoy, State Fire Marshal.

"Resumé of Present State Arson Laws," by W. G. Brooks.

"How to Recognize Fire Hazards on Inspection," by Sam Waugh.

"Storing and Handling Extinguishing Agents," by John Farrell, Billings.

Besides the large number of interesting papers presented, there were many interesting discussions and demonstrations.

The new officers of the association are Arthur L. Quinn, Missoula, President; J. A. Farrell, Billings, Vice-President; D. E. Moser, Bozeman, Secretary-Treasurer; Board of Directors, Chief George W. Dewar, Havre; Chief George Aitchison, Miles City and Robert Thorburn, Billings.

The 1934 convention will be held in Dillon.

Thomas Larkin Retires from N. Y. F. D.

Thomas Larkin, Battalion Chief of the New York Fire Department and for twenty-four years head of the school of instruction, resigned on August 1 at the age of seventy-five. He was a member of the department since 1884. He will receive a pension of $2,650.

Vincent J. Kane, President of the Uniformed Firemen's Association, New York City, was re-elected President as the end to a bitter election campaign. The association has spent large sums of money trying to win approval to the plan of an eight-hour day for firemen.

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(*Signed*) *Richard L. Smith*
Chief, Bureau of Fire, Pittsburgh, Pa.

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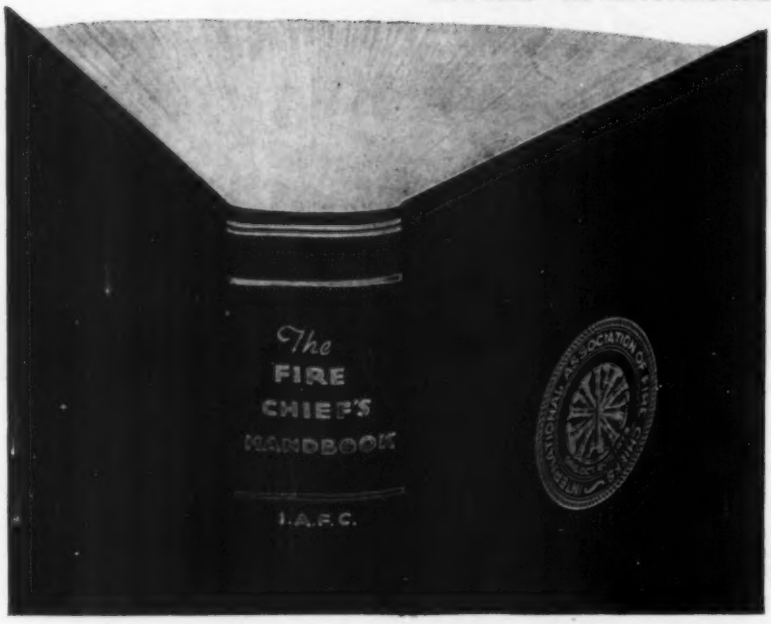

THE FIRE CHIEF'S HANDBOOK

By **FRED SHEPPERD**

In Collaboration with the **EDUCATIONAL COMMITTEE** *of the* **INTERNATIONAL ASSOCIATION OF FIRE CHIEFS**

THERE have been books on fire-fighting, but never anything so complete and authoritative as the "Fire Chief's Handbook." This book, a gold-mine of practical, helpful data, gives a reliable, up-to-the-minute answer to almost every question that might come up in modern fire-fighting practice.

The result of many months of exhaustive research and careful preparation, the "Fire Chief's Handbook" is the only book that has ever been officially approved and sponsored by the International Association of Fire Chiefs. As Editor of FIRE ENGINEERING, and the author of other widely used books, including "Simplified Fire Department Hydraulics," Mr. Shepperd is recognized as one of the country's outstanding authorities on the subject of fire protection.

For progressive fire chiefs, interested in up-to-date fire fighting methods, the "Fire Chief's Handbook" will be a mighty valuable reference guide. It gives to ambitious fire department officers and men, in plain, understandable form, information that should prove extremely helpful in preparing for promotional examinations. In fact, it is a book every fire fighter needs and ought to have.

Here are some of the subjects covered:

- FIRE DEPARTMENT TOOLS AND EQUIPMENT
- MOTOR FIRE APPARATUS PUMPS
- FIRE EXTINGUISHERS AND THEIR USE
- FIRE STREAMS
- FIRE-FIGHTING METHODS
- FIRE STATION DESIGN
- TRAINING OF FIREMEN
- SALVAGE OPERATIONS
- BUILDING INSPECTION
- VENTILATION AT FIRES
- CARE OF FIRE HOSE
- CHEMISTRY OF FIRE
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Robert D. Hazzard Opens Direct Branch in Yonkers, N. Y.

Robert D. Hazzard, Inc., has been formed as a direct branch at Yonkers, N. Y., for the American-LaFrance and Foamite Corp. He has four men working from his office, as shown in the photograph.

Fire Apparatus Manufacturers Preparing Code

The Motor Fire Apparatus Manufacturers' Association, recently organized, is now drafting a code for the fire apparatus industry. Tentative provisions of the code were taken up at a meeting held in Washington August 7.

The officers of the Association are: President, Chas. H. Fox, Ahrens-Fox Fire Engine Company; Vice-President, George R. Stephens, Buffalo Fire Appliance Corporation; Treasurer, H. B. Spain, Seagrave Corporation; Directors: Charles B. Rose, American-LaFrance and Foamite Corporation, and S. O. Cook, Boyer Fire Apparatus Company.

No Funds to Operate Fire Alarm

Monauguin, a community outside of New Haven, Conn., is without funds to operate its fire alarm and has stated that unless funds are received from the Board of Public Safety, it will be impossible to continue.

Firemen at the shore cannot hear the fire whistle when it blows in the center of East Haven. A fire alarm system was therefore installed at the shore, consisting of seven boxes, and this costs $350 yearly to maintain. The total expense to the fire company, including operation of fire apparatus has been almost $900. In the past sufficient money has always been secured through carnivals to cover this. For the last three years this did not hold, and expenses have been paid through the financial reserve which is now exhausted.

Work of Worcester Salvage Corps

Lorton C. Walden, Superintendent of the Worcester Protective Department, Worcester, Mass., has succeeded in having eight buildings torn down as fire hazards, since October, 1932. As there are no building laws by which this can be done, it was accomplished only through the cooperation of the owners and the mortgagees of the properties.

When the patrol responds to a blaze, the officers are instructed to make a complete inspection after the fire. These reports are turned over to Mr. Walden, who investigates the conditions at once and then communicates with both the owner and mortgagee of the property. Through their cooperation it has been possible to adjust such fire hazards.

High Pressure Orders to Be Telegraphed

All high pressure orders of the New York Fire Department are to be sent by means of the fire alarm telegraph. The use of the telephone for sending orders for the high pressure water system will be eliminated.

For example, the order of 8-150-150 from a fire alarm box will indicate to the dispatcher at the fire alarm headquarters that he is to notify the high pressure pumping station to raise the pressure to 150 pounds in the vicinity which supplies the district embracing alarm box No. 150. If the pressure is to be shut down on box 150, the signal sounds 8-150.

W. H. Shafer of Ahrens-Fox Dead

William H. Shafer, Secretary and Director of the Ahrens-Fox Fire Engine Company for many years, died of a heart ailment on August 5 at his home in Hyde Park, Ohio. He has been associated with the company for fourteen years.

He was active in Masonic circles, and was a member of the Engineers' Club of Cincinnati.

Mr. Shafer is survived by his widow, two daughters and a son.

Urges Losses to be Paid After 60 Days

Following a special executive committee meeting of the National Board of Fire Underwriters, fire insurance companies were advised to exercise their rights to wait sixty days before paying fire loss claims. This advice was given at the time of bank holiday but now the National Board recommends that the practice be made permanent except in the case of losses of $100 or less and for claims that followed the California earthquakes of March 10. The following resolutions were recently adopted:

"Whereas, It has been demonstrated in this and previous periods of economic depression that an unusually large number of suspicious losses have occurred; and

"Whereas, It is evident that the customary immediate payment of losses in such circumstances tends to encourage arson, incendiarism and fraud and so is against the public interest; and

"Whereas, It is the public duty of insurance companies to discourage such criminal activity; and

"Whereas, From time immemorial the necessity of a period for investigation of losses has been recognized in insurance contracts; now, therefore, be it

"Resolved, That the National Board of Fire Underwriters deems it advisable that the payment of all losses on all classes of risks in excess of an agregate loss to assured of $100 be withheld for the period of sixty days after proof of loss unless otherwise provided by the printed conditions of the policy or by statute.

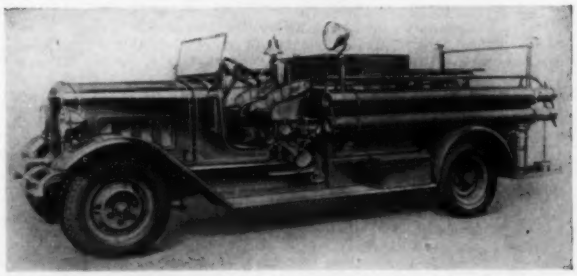
"It is not, however, deemed advisable that this practice apply to losses arising out of the catastrophe in southern California on March 10, 1933."

No Beer for N. Y. Firemen

Fire Commissioner John J. Dorman of the New York Fire Department has amended Section No. 114 of the Book of Rules and Regulations relating to the bringing in, sending out, or having any intoxicating beverage or ingredients used in preparation in a fire house. The change made covers the beer question, even though legally it is not considered as an intoxicating beverage.

A committee has been appointed by the New Jersey and New York Volunteer Firemen's Association to plan a Field Day to be held in the fall. Should enough member companies show interest, tournaments and contest events will be held.

While on his way to answer a fire call, Chief Charles Schnibben of Wilmington, N. C., was killed when his automobile overturned. The driver tried to make a sharp turn to avoid a commercial truck ahead. Chief Schnibben was Treasurer of the North Carolina Fireman's Association. He is survived by a widow and five sons.



New Type Maxim Pumper Passes Twelve-Hour Test

A Maxim 750-gallon pumper, Model R75, has successfully passed a twelve-hour test conducted by the New England Insurance Exchange. During the six-hour capacity test it delivered 787 gallons a minute at 123 pounds net pump pressure. The engine has a 51.34 S.A.E. horsepower rating.

PROPOSED IMPROVEMENTS

Ramsey, N. J.—Plans are being made for purchase of new triple combination pumper for fire department at estimated cost of $10,000.

Waukegan, Ill.—Reports state city council has been requested to purchase a new pumper and additional fire hose for the fire department.

Salesmen Wanted

Established and well-known manufacturer specializing in Fire Department supplies has several excellent openings in Middle West territory for capable salesmen, with good references, experienced in selling municipal equipment. Write fully, in confidence, to Box 715, c/o FIRE ENGINEERING, 24 W. 40th St., New York City.

8

Boston, Mass.—Two fire stations advocated by officials of the fire department as acceptable projects in Mayor Curley's $23,000,000 construction program to be financed with federal aid. Henry A. Fox, Chief.

Berkeley, Cal.—Fire Chief Geo. Haggerty in annual report recommended purchase of an aerial hook and ladder, truck, for downtown area at Durant ave. fire house, 10,000 ft. fire hose, 100 new fire boxes and new fire stations at Grizzly Peak Blvd. and at Hopkins St.

Oroville, Cal.—Members of the Southside Fire Dept. discused purchase of a fire pumped for use in the district.

Los Angeles, Cal.—Additional fire station construction, to be part of the suggested public works program, proposed by Fire Chief Ralph J. Scott and sent to Mayor Frank L. Shaw for approval.

CONVENTION DATES

Aug. 8-10.—INDIANA FIREMEN'S ASSOCIATION. 17th Annual Convention, Gary, Ind. Secretary, Clem Smith, P. O. Box 520, Terre Haute, Ind.

Aug. 8-10—TENNESSEE FIREMEN'S ASSOCIATION. 3rd Annual Convention, Dyersburg, Tenn. Secretary-Treasurer, Joe J. Martin, Nashville, Tenn.

Aug. 8-11—STATE FIRE CHIEFS' ASSOCIATION OF VIRGINIA. 5th Annual Convention, Harrisonburg, Va. Secretary-Treasurer, Chief E. H. Rouse, Orange, Va.

Aug. 8-11—VIRGINIA STATE FIREMEN'S ASSOCIATION. 47th Annual Convention, Harrisonburg, Va. Secretary, O. W. Dabney, Staunton, Va.

Aug. 11—CUMBERLAND VALLEY VOLUNTEER FIREMEN'S ASSOCIATION. 32nd Annual Convention, Greencastle, Pa. Secretary, C. L. Jacobs, Waynesboro, Pa.

Aug. 15-18—FIREMEN'S ASSOCIATION OF THE STATE OF NEW YORK. 61st Annual Convention, Poughkeepsie, N. Y. Secretary, Fred A. Davis, Fort Edward, N. Y.

Aug. 16—VERMONT STATE FIREMEN'S ASSOCIATION. 42nd Annual Convention and Parade, Woodstock, Vt. Secretary-Treasurer, Spencer Carr, Poultney, Vt.

Aug. 16-18—UTAH STATE FIREMEN'S ASSOCIATION. 26th Annual Convention and Tournament, Provo, Utah. Secretary, John J. Creedon, Bingham, Utah.

Aug. 18-19—CONNECTICUT STATE FIREMEN'S ASSOCIATION. 50th Annual Convention, Old Saybrook, Conn. Secretary, David W. Harford, South Norwalk, Conn.

Aug. 21-24—CALIFORNIA STATE FIREMEN'S ASSOCIATION. 11th Annual Convention, Woodland, Cal. Secretary-Treasurer, H. E. Strasser, 1171 Tenth Ave., San Diego, Cal.

Aug. 21-26—GREAT LAKES ASSOCIATION OF FIRE CHIEFS. Annual Convention, on board Steamer Seeandbee, during convention of I. A. F. C. (Change of date.) Secretary, Chief R. E. Mottesheard Dearborn, Mich.

Aug. 21-27—INTERNATIONAL ASSOCIATION OF FIRE CHIEFS. 61st Annual Convention, on board Steamer "Seeandbee," for Cruise on Great Lakes. Secretary-Treasurer, Ex-Chief James J. Mulcahey, 16 Franklin Avenue, Yonkers, N. Y.; Executive Secretary, Jay W. Stevens, Merchants' Exchange Bldg., San Francisco, Cal.

Aug. 22—MISSOURI VALLEY ASSOCIATION OF FIRE CHIEFS. Annual Convention 2nd day of I. A. F. C. Convention, on Board Steamer "Seeandbee," Secretary-Treasurer, Chief Ray Tiller, Waterloo, Ia.

Aug. 29-Sept. 1—DOMINION ASSOCIATION OF FIRE CHIEFS. 35th Annual Convention, Empress Hotel, Peterborough, Ont., Can. Secretary, Chief James Armstrong, Kingston, Ont.

Sept.—ARKANSAS STATE FIREMEN'S ASSOCIATION. 12th Annual Convention. Eureka Springs, Ark. (Exact date to be decided later.) Secretary-Treasurer, H. D. Compton, Little Rock, Ark.

Sept.—OKLAHOMA STATE FIREMEN'S ASSOCIATION. 39th Annual Convention, Oklahoma City, Okla. (Exact date to be decided later.) Secretary-Treasurer, Charles Siemp, 820 East 19th St., Oklahoma City.

Sept.—NORTHWEST FIRE SCHOOL. 6th Annual Fire School, exact date not set, but probably in September, as usual. University of Minnesota, Minneapolis. Address, Chief Frank W. Fuller, Brainerd, Minn.

Sept. 5-7—KENTUCKY STATE FIREMEN'S ASSOCIATION. 14th Annual Convention, Pikeville, Ky. Secretary, Capt. S. G. Render, 940 Starks Bldg., Louisville, Ky.

Sept. 12-14—LOUISIANA STATE FIREMEN'S ASSOCIATION. 28th Annual Convention, Monroe, La. Secretary, Mayor T. E. Wright, Houma, La.

Sept. 12-14—MASSACHUSETTS STATE FIREMEN'S ASSOCIATION. 54th Annual Convention, Hotel Bradford, Boston. Secretary, Daniel J. Looney, 448 Old South Bldg., Boston.

Sept. 12-14—WISCONSIN STATE FIRE CHIEFS' ASSOCIATION. 5th Annual Convention. Wisconsin Rapids, Wis. Secretary, Chief Arthur J. Rahn, Two Rivers, Wis.

Sept. 18-19—MISSOURI ASSOCIATION OF FIRE FIGHTERS. 9th Annual Convention, Kansas City, Mo. Secretary-Treasurer, M. J. Mulvoy, 405 City Hall Building, St. Louis, Mo.

Sept. 19-20—IOWA FIREMEN'S ASSOCIATION. 56th Annual Convention, Denison, Ia. Secretary, Paul A. Soener, Independence, Ia.

Sept. 21-22—DELAWARE VOLUNTEER FIREMEN'S ASSOCIATION. 13th Annual Convention, Laurel, Del. Secretary, Sam H. Carson, Dover, Del.

Sept. 22-23—NEW JERSEY STATE FIREMEN'S ASSOCIATION. 56th Annual Convention, Hotel Dennis, Atlantic City, N. J. Secretary, William Exall, Room 602, Chamber of Commerce Bldg., Newark, N. J.

Sept. 26-28—PACIFIC COAST ASSOCIATION OF FIRE CHIEFS. 40th Annual Convention, Portland, Ore. (Change of date.) Secretary, Jay W. Stevens, 1014 Merchants' Exchange Bldg., San Francisco, Cal.

Oct. 2—TEMISKAMING FIREMEN'S ASSOCIATION. 10th Annual Convention, New Liskeard, Ont., Can. Secretary-Treasurer, F. E. Thompson, New Liskeard, Ont.

Oct. 3-5—PENNSYLVANIA STATE FIREMEN'S ASSOCIATION. 54th Annual Convention, Lock Haven, Pa. Secretary, Charles E. Clark, Wayne, Pa.

Oct. 17-19—ILLINOIS FIREMEN'S ASSOCIATION. 47th Annual Convention, Rockford, Ill. Secretary, Assist. Chief Roy W. Alsip, Fire Department, Champaign, Ill.

Oct. 17-19—NEBRASKA STATE VOLUNTEER FIREMEN'S ASSOCIATION. 51st Annual Convention, North Platte, Neb. Secretary-Treasurer, Fred W. Muller, Norfolk, Neb.

Oct. 18—FIRE CHIEFS' EMERGENCY PLAN. Next meeting, Fire Headquarters, Briarcliff Manor, N. Y. Secretary-Treasurer, Capt. E. Riviere, Fire Headquarters, Larchmont, N. Y.

Oct. 25—FAIRFIELD COUNTY FIRE CHIEFS' EMERGENCY PLAN. Next Meeting, Fire Headquarters, Turn-of-the-River, Conn. Secretary, John Moehring, Toms Road, Stamford, Conn.

May 9, 1934—DEL-MAR-VA VOLUNTEER FIREMEN'S ASSOCIATION. 5th Annual Convention, Lewes, Del. Secretary, E. C. Bailey, Laurel, Del.

July 17-18, 1934—MARITIME FIRE CHIEFS' ASSOCIATION. 20th Annual Convention, Truro, N. S., Can. Secretary-Treasurer, K. J. MacRae, Capt. Salvage Cope, St. John, N. B.

Ex-Chief Sheehan of West Orange Dead

James J. Sheehan, formerly Chief of the West Orange, N. J., Fire Department, died July 10 at the Orange Memorial Hospital following an operation. He was seventy-one years old. Mr. Sheehan was one of the first three paid firemen in West Orange and he joined the service in 1894. Six months later he was appointed Chief. He served at that post until he retired in 1926.

The Late Ex-Chief J. J. Sheehan

Lowell Threatened

Lowell, Mass., was seriously threatened on June 25, when a fire that started in a large empty factory spread to adjoining frame houses and was rapidly developing into a conflagration, when the rush of the flames was halted by Lowell firemen under direction of Chief James C. Sullivan and aided by firemen and apparatus from nearby cities.

One woman, seventy years old, perished in her home when she went back to obtain her pocketbook and was trapped by the flames which spread with great rapidity and were fanned by a stiff breeze.

The Swedish Methodist Church and ten dwellings were destroyed. Flying embers caused many roof fires and burned the upper portion of one home which was nearly a half mile from the fire zone.

Apparatus responded from Dracut, Chelmsford, Lawrence, Woburn, Haverhill, Tewksbury, Reading, Arlington, Bedford, Chelsea, Stoneham, Wilmington, Salem, Peabody, Methuen, Belmont, Boston, and Nashua, N. H.

One ladder truck was badly burned and several hose lines had to be abandoned because of the quick spread of the flames. Damage was estimated at $250,000.

HARRY BELKNAP.

COMPLETE PUMPER

using Barton Fire Pump front mounted on D-I International Harvester chassis

THE PUMPER shown here is adaptable for small town and rural community service. And it is complete in every way, including 100 g.p.m. booster tank, 24-foot extension ladder, 12-foot roof ladder, 1000 feet of 1½-inch hose, siren, axes, etc.

Yet, despite its completeness and high quality throughout, the cost of this apparatus assembled and ready for action is extremely low. There are two reasons why. First, the Barton Pump in itself is low cost. Second, the pump can be mounted on a strictly standard chassis—no costly alterations or special chassis features required.

Write today for FREE CIRCULAR giving full particulars on the entire Barton line. AMERICAN STEAM PUMP COMPANY, Battle Creek, Mich.

ALL BARTON FIRE PUMPS are centrifugal type automatically primed, handling clean or dirty water equally well. There are five sizes. Two largest pumps (350 and 500-gallon) have passed Underwriters' 12-hour tests.

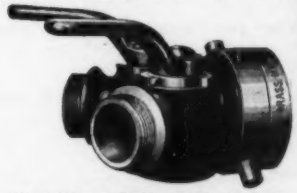
BARTON FIRE PUMPS

ELKHART BRASS GOODS

Give You Longer Service

Every conceivable type of equipment, all of the finest grade, is listed in our new catalog. It is on the desks of some of the biggest fire chiefs in the country. Just write us saying where you want yours sent.

We number hundreds of satisfied chiefs among our customers. There must be a reason. Try Elkhart on your next order.



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ELKHART, IND.

THE "OVERHEAD DOOR" SHOULD BE USED IN EVERY FIRE DEPARTMENT STATION

Reliable, Rapid Action

The "OVERHEAD DOOR" either *hand* or *electrically* operated is without question the proper station door equipment. Entire lack of complicated apparatus insures reliable as well as rapid operation.

Hand operated doors are controlled from the driver's seat. A pull on a convenient rope opens the door in three seconds. Overbalancing springs and a simple trip complete the operating mechanism. The electric control may be operated from the driver's seat—also may be connected with the incoming alarm system. The door is open before the driver takes his seat. Glass paneling may be arranged to meet any requirement.

"Overhead Door" sales-service is found everywhere. There is an Overhead Door Company in your community staffed by skilled door engineers. Call them for complete information or write.

OVERHEAD DOOR CORPORATION
Dept. 933
Hartford City, Indiana, U. S. A.

Overhead Door Company of Canada, Limited, Toronto, 3, Canada
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THREE BOOKS

Every Ambitious Fire Fighter Should Have

They have helped hundreds to get bigger jobs and bigger pay—They will help you too—

Please use the coupon

QUESTIONS AND ANSWERS FOR LIEUTENANT AND CAPTAIN

A 260 page book, fully illustrated, by Geo. J. Kuss, Former Deputy Chief, New York Fire Department, and Fred. Shepperd, Managing Editor of FIRE ENGINEERING.

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If you are studying for a promotional examination, you need this book, and if you are not studying for examination, this book will nevertheless give you a vast amount of valuable information on up-to-date fire methods.

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The following are a few of the important topics covered:

Detailed description of the proper procedure in fighting fires: 1. Size-up; 2. Calling of help; 3. Saving of life; 4. Covering exposures; 5. Extinguishing fire; 6. Overhauling. How to test motor fire apparatus. How the following types of fires should be fought: Large department stores, large hotels and rooming houses, large area residential fires, combination stores and apartments, motion picture film exchanges, tall office buildings, wholesale grocery stores and warehouses, group building fires, theatres, schools, factories, etc., and considerable other data.

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THE FIRE SERVICE INSTRUCTOR

Concluding Installment of a Treatise to Aid Those Responsible for Training Men in the Fire Service to Develop a Systematic Type of Teaching

By O. D. Adams

State Director for Vocational Education in Oregon and Prof., Industrial Education, Oregon State College, and

Edward L. Boatright

Battalion Chief, Portland, Ore., Fire Department, and Director, Portland Fire College

Chapter IV (Concluded)—Helps in Teaching

General Description of Aero System (Continued)

Manual Fire Alarm Stations

THE Aero manual station is of the "one operation break glass" type and is so designed that it can be assembled onto any detector unit. The addition of manual stations to an Aero system does not change the wiring or operating scheme and is accomplished by merely adding extra contacts to the diaphragm frames and providing manual covers.

Control Panel with Transmitter and Relay

The control panel consists of two clock-driven transmitters with a retard and associated relay. One transmitter is used to give trouble signals and the other operates for fire alarm signals.

In case of failure or weakening of the local battery or other features which might prevent the transmitting of a signal the trouble clock is released.

Sudden flashes of heat causing a momentary closure of the detector contacts are controlled by the retard which is not de-energized along enough to cause the transmission of a signal.

Closure of the diaphragm contacts causes the operation of the alarm transmitter, sending a distinctive fire signal and also operating the local gongs.

Annunciators and Bells

The annunciator operated from the unit detector sets is used to show the exact location of the fire. This is usually placed on the outside of the building, but an interior type may be provided where necessary. It consists of a red enameled weather-proof cast iron case, provided with targets or drops visible when in their actuated position.

The local alarm bells are of the single or double vibrating type, located so as to give a general alarm throughout the building on the outbreak of fire.

Source of Energy

Current for the operation of the Aero system is supplied from a storage battery with automatic charger where A.C. current is available; otherwise, a suitable storage battery is used. Aero alarms also register on Sprinkler supervisory and Valve alarm Circuits if connected to same.

Keys to Tests

1. —	11. +	21. —
2. +	12. —	22. +
3. +	13. —	23. +
4. —	14. —	24. —
5. +	15. +	25. +
6. +	16. +	26. —
7. —	17. —	27. —
8. —	18. —	28. —
9. —	19. +	29. +
10. +	20. +	30. +

1. —	10. —	19. +
2. —	11. +	20. —
3. +	12. +	21. —
4. +	13. —	22. —
5. +	14. +	23. —
6. —	15. —	24. —
7. —	16. +	25. +
8. —	17. +	
9. +	18. —	

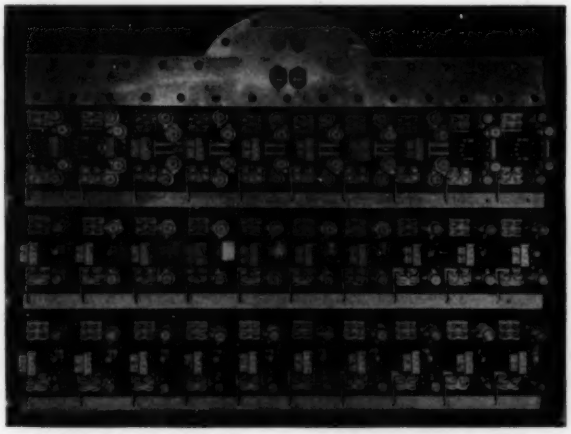
Rectifiers Replace Power Chargers

A change has been made in the fire and police alarm systems of Indianapolis, Ind., which has greatly increased its efficiency.

Thirty new General Electric copper oxide rectifiers have been installed at fire alarm headquarters. The copper oxide rectifiers are supplied with 3-phase alternating current, each phase operating ten rectifiers. The three bulbs mounted at the top of the panel board are connected, one to each phase. In the event of one, two or three phases failing, the light or lights will go out.

Besides this protection, each rectifier is connected to another small bulb at the top of the panel board. There are thirty of these small bulbs in all, one for each rectifier. If the current supply should be cut off from any individual rectifier, the small bulb connected to that particular rectifier will light and a relay will cause the buzzer at the top of the panel to sound a warning.

Before these copper oxide rectifiers were installed, the batteries were charged from direct current power lines requiring resistors to step down the voltage. Two sets of batteries had to be used—one working while the other was being charged. With the new installation, duplicate sets of batteries are eliminated.



Indianapolis Fire Alarm Circuits Modernized with Rectifiers

The Indianapolis installation is in charge of Thomas T: Haefling, Superintendent of Police and Fire Alarm Systems.

Michigan Firemen Meet in Lansing

Gov. William Comstock, of Michigan, and Mayor Max Templeton, of Lansing, welcomed the fifty-ninth annual convention and the fifth annual fire college, of the Michigan State Firemen's Association that was held in Lansing, July 17-20.

Dean H. B. Dirks, of the state college, spoke on the future of the fire college. C. E. Gauss, Commissioner of Insurance, was on the opening session program.

Chief L. O. Knowles, Freeport, spoke on rural fire protection, and Sam Robinson, Assistant State Fire Marshal, talked on cooperation between Fire Departments and the State Fire Marshal. John Strohm, Fire Marshal, spoke on "Publicity for Fire Prevention."

The new officers are J. N. Clark, Zeeland, President; Ernest Daunter, Assistant Chief, Jackson, First Vice-President; Rudolph Welsh, Chief, South Haven, Second Vice-President; Charles V. Lane, Charlotte, Secretary. The 1934 convention will be held in Manistee.

FALSE ALARMS

WELL PROVIDED

Sam, a most unusual Negro, was not a fireman but he was most important to the village department. He was the Major of a musical outfit that was to accompany the department to a convention. He was to be gone for several days. As he was taking leave of the family his wife came to the door and shouted:

"Come back, heah, Sam. Yo' hasn't cut a stick of wood fo' de stove—and you'll be gone most a week!"

Sam turned with an aggrieved look on his face.

"Honey," he said in a tone of injured innocence, "what's de mattah? You all talks as though Ah was takin' de axe with me."

She may not be an insurance agent's daughter, but she knows her surrender values.

QUICK EFFECT

Locally he was famous. He was known as the greatest fabricator of stories which few could believe. In the club some of the men were forced to listen to one of his travel experiences.

"Well, fellows," he continued, "there I was on that lonely road, miles from nowhere, with a blazing car, no water, no fire extinguisher or anything. What do you imagine I did?"

One of the bored answered with a resigned sigh, "Took a deep breath and blew the fire out."

Fido, the pup, says, "I'm all in favor of Roosevelt's reforestation movement."

TOO EXACTING

An apparatus salesman who had a weakness for fine clothes, was being lectured by a creditor who was unable to collect his debt. He said:

"You could live on your income if you dressed according to your income."

"But I have never been a follower of the nude cult," remarked the salesman.

Over-stuffed steins are fashionable again.

WELL FITTED

The two were at it again. They held the record for everlasting tongue lashers. At the end of a long argument, one said to the other:

"With feet like yours you should get a job with the government."

"What doing?"

"Stomping out forest fires."

VERY HELPFUL

He had left word at the country hotel that he wanted to be called at six in the morning, as he had to get a train which would take him to another town for an engine test. The slumbers of this Underwriter Engineer were rudely interrupted by the knocking of the hotel man.

"Good morning, sir," he said. "You told me to call you at six o'clock, but I don't wake up myself. I wanted to tell you that it's eight o'clock now and the train is gone, so you can sleep as long as you like."

And if Mohammed went to the mountains, we suppose his wife went to the seashore.

CONTRARY TO FACTS

At the engine house he gazed at an old pumper purchased fifteen years ago, and seemed lost in far-away contemplations. He remarked to another fireman nearby:

"Do you know, I wish this machine could deliver 825 gallons a minute."

"Why, what makes you wish that?"

"That's what I put down on the examination paper."

"Ladies without escorts are not admitted."

"Who says I'm a lady?"

SPEEDY CALL

A motherly type of woman, doing social welfare work, was making the rounds of the prison cells.

"So why are you in prison, my good man?" she asked.

"For driving a car too slowly."

"You mean too fast."

"Naw. Too slow. The guy in the fire engine caught up with me and I was pulled in for blocking the road."

COOPERATION

At a very smoky apartment house fire, where egress by way of the stairs was cut off, members of a truck company had to carry the badly scared residents down the ladder. One woman who had swallowed a great deal of smoke and who believed she was very sick, was placed on the sidewalk for examination by the ambulance doctor. When he came, she was moaning.

"Oh, Doctor! I'm so sick. If only I could die."

"There now, quiet down," he answered in a calm tone. "I'll do the very best I can for you."

There is one man who discovered his credit is good. When he returned from his vacation, he found twenty-eight bottles of milk on the porch.

JUST A GUESS

The annual house inspection was on. Firemen were detailed to cover various sections of the city. One of these inspectors had the ill fortune to find a busy housewife who could not spare time to go through the various parts of the house. In front of the adjoining building he found a little boy playing, and before ringing the bell he asked:

"Is your mother engaged."

The boy thought for a moment and answered, "I think she's married."

Radio will never be wholly satisfactory to the listener until he can turn off unpopular programs with a click that will be heard in the broadcasting studio.

—Drawing by "Art" Espey

Fireman: "The Captain sent me down for a gaget for his oil burner."
Hardware Clerk: "Don't carry 'em, son. Try the garage down the street—they carry parts for most all cars."

Just walk along and let the hose unfold. That's all there is to laying NIEDNER'S Red Chain Forestry Hose. Prices and samples on request.

The Forest Service Uses

NIEDNER'S

Red Chain

FORESTRY HOSE

Standard of the forest service — NIEDNER'S Red Chain Forestry Hose is used throughout the entire country. It has proven itself time and again in actual fire service.

If you really want the best hose for your portable pumps, get NIEDNER'S. It is the lightest you can buy — stores easily, carries easily and is extremely flexible even when wet. It sweats just enough to protect the fabric from fire damage.

CHAS. NIEDNER'S SONS CO.
MALDEN, MASSACHUSETTS

HEWITT-GUTTA PERCHA
FIRE HOSE

A complete line, including
Wax Treated - Solid Multiple Woven
AND
Single and Double Jacket Hose
Manufactured by
HEWITT RUBBER CORPORATION
BUFFALO, N. Y.
"Territories Available"

EDDY
Fire Hydrants

Are given preference by so many fire protection and water works men because they know that more than half a century of experience go into their manufacture and they embody valuable and exclusive features.

Write for the Facts

EDDY VALVE CO.
Waterford, N. Y.
James B. Clow & Sons, Chicago Agents

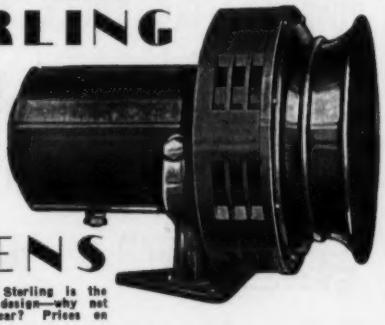
Bi-Lateral Fire Hose

The one hose that does not require frequent replacements. Always reliable for fire service no matter how old, if the jackets are intact.
Lined with three rubber tubes, specifically guaranteed for six years.

BI-LATERAL FIRE HOSE CO.
15 Park Row, New York, N. Y.
20 N. Wacker Drive, Chicago, Ill.

STERLING

The fire signal that clears the street as nothing else can. Every run you make will be safer if you follow in the wake of this fine, dependable siren.



SIRENS

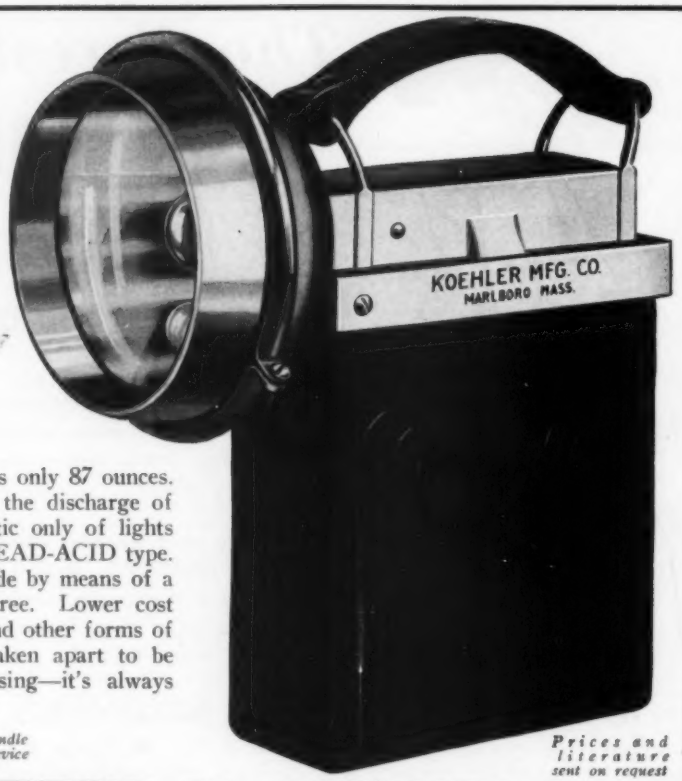
This "free rolling" Sterling is the last word in siren design—why not have one on your car? Prices on request.

THE STERLING SIREN FIRE ALARM CO., Inc.
60 Allen Street, Rochester, N. Y.

25,000 Candlepower—Length of Beam 2500 Feet

Invaluable for Locating Distant Objects and Directing Work

WHEAT SPOTLIGHT for OFFICERS



It is non-spillable, rechargeable, and weighs only 87 ounces. Gives a constant volume of light thruout the discharge of the battery, this feature being characteristic only of lights employing a rechargeable battery of the LEAD-ACID type. The shape allows it to be carried at the side by means of a shoulder strap, which leaves both hands free. Lower cost of operation in comparison to flashlights and other forms of lights using dry cell batteries. Is not taken apart to be charged—just push in the plug after using—it's always ready to work when you want it.

Chrome Plate Finish—Leather Handle Toggle Switch—Simple Focusing Device

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COMFORT AND SECURITY WITH THE

COMFORTABLE AS YOUR OLD FELT HAT; WON'T SHAKE OFF

Never go to a fire without the protection of a good helmet. It may save your life.

CAIRNS LATEST LOW HEAD CUSHION LINED HELMET

Send for your copy of Catalog No. 227, showing this latest improvement.

CAIRNS & BROTHER

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For CITY *Service*

FOR ANY MAKE OF TRUCK CHASSIS

For RURAL *Service*

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38 Extinguishers, Carbon Tetrachloride
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41 Fire Boat Nozzle Equipment
42 Fire Department Supplies, General
43 Fire Exit Devices, Door Opening
44 Fire Alarm Posts
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46 Fire Escapes, Rigid
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87 Rubber Clothing
88 Salvage Covers
89 Searchlights
90 Shingles, Fire Retardant
91 Shirts, Firemen's Special
92 Sirens, Apparatus and Chiefs' Cars
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94 Soda and Acid Chemicals
95 Spark Plugs, Fire Apparatus and Motorcycles
96 Squad and other Auxiliary Cars
97 Sprinkler Head Shut-Offs
98 Sprinkler Supervisory Service
99 Sprinkler Systems, Automatic, Foam
100 Sprinkler Systems, Automatic, Water
101 Steam Fire Engines
102 Syphons, Water
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116 Wrecking Trucks

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24 West 40th Street, New York City

As a Fire Protection official I should like to have descriptive literature and complete information mailed to me, without cost or obligation, on the equipment indicated by the following numbers:

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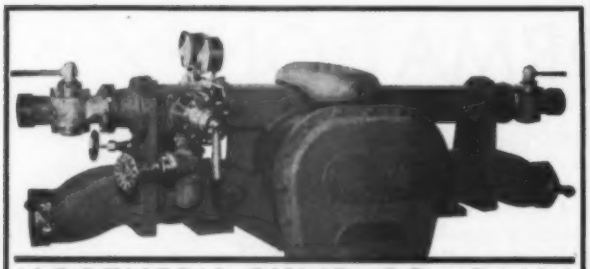

NORTHERN PUMP COMPANY
ESTABLISHED 1907
MINNEAPOLIS, MINN.

The depression has seemingly brought out a desire for cheaper things.

Should fire pumps be built to meet this demand? The Hale Company's answer is emphatically *no*. Therefore, there has been absolutely no let down in the quality of material, the character of design, nor in the precision of workmanship going into each Hale pump.

HALE FIRE PUMP CO., Inc.
CONSHOHOCKEN, PA.

TRIPLE COMBINATION 3 TONE FEDERAL WHISTLE

A low pressure triple combination air whistle that will operate off of any existing fire alarm system. It has no equal for tone volume. No moving parts—nothing to get out of order. Guaranteed for 10,000 hours of continuous blowing. Get complete details and attractive price by writing for Bulletin 38.

FEDERAL ELECTRIC COMPANY
8702 South State Street, Chicago, Illinois

JOHN H. CLAY, INC.
1320 Ridge Ave., Philadelphia, Pa.
Established 1864

Clay Automatic Door Opening Devices for Fire Station Doors Opening either In or Out. Save valuable minutes in getting to fires. Send for Bulletin.

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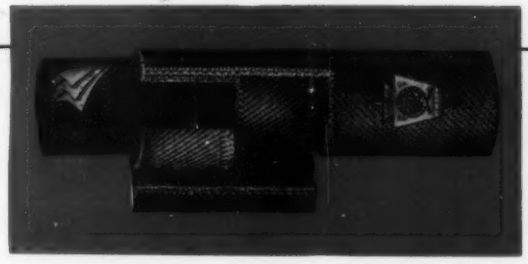
Sterling Siren Fire Alarm Co., Inc.	259

FABRIC FIRE HOSE

In this little plant we do but ONE thing—but we do that to perfection!



Think of That When You Buy Hose

MANY YEARS ago we began specializing in fire hose. Today we are, perhaps, the only plant in the country exclusively devoted to the manufacture of high grade fire hose. From our little plant on the banks of the Pootatuck river, we have shipped hose to all parts of the country. Some of it over 30 years old is still in service.

Making good fire hose is the only thing we do. We believe it's important enough to spend our lives doing just that one thing—but doing it better than anyone else knows how. When you buy hose, we'll appreciate your remembering that we, like yourself Chief, are trying to do one thing and trying to do that to the best of our ability.

FABRIC FIRE HOSE COMPANY

SANDY HOOK, CONNECTICUT

We shall appreciate your mentioning FIRE ENGINEERING *when writing advertisers*

A Hose for Every Fire Department Need

THE MAN who buys fire hose without investigating Eureka Brands is overlooking 58 years of fire hose manufacturing experience ... and the most complete line of quality fire hose that has ever been made ..

EUREKA FIRE HOSE MANUFACTURING COMPANY

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Boston	Dallas	Los Angeles	Philadelphia
Charlotte, N. C.	Denver	Minneapolis	Salt Lake City
Chicago	Detroit	New Orleans	Seattle
		Syracuse	

EUREKA FIRE HOSE